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The Potential of a Virtual School to Help Mobile Students

By:

Amy Dickinson

A dissertation submitted to the faculty of

Bellarmino University

In partial fulfillment of the requirements for the degree of

Doctor of Philosophy

November 29, 2016

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Amy Gossman Dickinson

Abstract

An average of 1.8 million students drop out of high school each year (National Council of Education Statistics, 2014). Dropping out of high school is a problem for both society and the individual (Rumberger, 2003). It can lead to lower wages, unemployment, and incarceration. Mobile students make up a part of those who drop out of school. Students are considered mobile if they attend more than one high school in four years (Rumberger & Larson, 1998). One way of helping highly mobile students is to offer asynchronous virtual classes. Using Institutional Theory (Rumberger, 2001) and Academic Mediation Theory (Vygotsky, 1978; Bachman, Green, & Wirtanen, 1971; Ekstrom, Goertzt, Pollack & Rock, 1986), this qualitative study explores the number of mobile students attending one virtual school, and how the virtual school is helping mobile students. Participants were purposely sampled and included six teachers from a range of subjects, the administrator, and school counselor. Data was collected for one year and included two interviews, an observation, and document examination. Findings show 100% of students at the virtual school are mobile with 60% attending three or more schools and 9% attending five or more schools. There are three other findings: (a) the asynchronous nature of the virtual school enables teachers and students to work outside of normal strictures in order to help mobile students, (b) the school and teachers are counteracting communication and instructional challenges in order to help mobile students, and (c) there are policies and procedures the virtual school utilizes in order to help mobile students progress through courses. These findings speak to the potential of virtual schools to positively mediate mobility factors by enabling students to learn in an asynchronous environment from anywhere there is an internet connection.

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DEDICATION

I dedicate this study to those students who struggle to complete high school because life gets in the way, and those who help them.

I also dedicate this to my daughter, Gillian, who hopefully knows that with hard work and perseverance any dream, no matter how grand, can come true.

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Chapter 1 – Introduction

Dropping Out of High School

Dropping out of high school has long been a problem for society, schools, and individual students. In 1940, more than 60% of people age 25 to 29 had not completed high school. By 1980, it was less than 16% (U.S. Bureau of the Census 1985, Table 215). The 1980 dropout rate was lower because of the change in demographics at that time. More whites were dropping out than in previous years. It was not until the early 1980's that dropout research was developed (Rumberger, 1987). Before the 1980's, dropping out of high school was limited to the disadvantaged and minorities (Rumberger, 1983). More white and middle class students began dropping out of school, along with a high number of minority students. Minority student drop out numbers have been historically high (Rumberger, 1987). Once drop out rates included increased numbers of whites and middle class students, an interest in understanding and preventing students from dropping out of high school ensued (Rumberger, 1987).

Rumberger and Ah lim (2008) reviewed research on high school students dropping out of high school over a twenty- five year period. They chose only studies that were quantitative in nature and had been in peer -reviewed journals. Their findings support the claim that not only is dropping out of high school a process that can take years to conclude, but it is also a very complex area of research. In this review of research, Rumberger and Ah lim (2008) discuss the predictors of student dropout both inside and outside of the family and found that there is not one clear reason for dropping out of high school. Research by Rumberger and Ah lim, (2008) suggests that dropping out of high school is a process rather than an event and it often begins in early elementary school. Rumberger and Ah lim (2008) point to work by researchers from the

80's and early 90's that viewed dropping out of high school as a culmination of gradual disengagement (Rumberger, 1987; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989).

Predictors of Dropping Out of High School

Prior research has largely separated the reasons and predictors for dropping out into two categories: individual and societal (Rumberger & Ah lim, 2008; Rumberger, 1987; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). Both of these categories of predictors are important in attempting to understand the often complex phenomenon that is dropping out of high school. With this framework of categories, Rumberger and Ah lim (2008) established the foundation for research focused on understanding the process of students dropping out of high school.

Individual predictors. Individual predictors are those predictors that can be changed by an individual and are controlled at the individual level (Rumberger & Ah lim, 2008). According to Ellickson, Bui, Bell, and McGuigan (1998), early cigarette use can increase a student's risk of dropping out of high school. Kaplan, Peck, and Kaplan (1997) found that association with people who are involved in illegal activities is also an individual predictor because an individual can change with whom they are involved. These predictors are ones that an individual or individuals have control over.

Societal predictors. Socially controlled predictors are predictors over which the individual does not often have control. Coming from a low socioeconomic level has been the most widely researched predictive variable for dropping out of high school (Rumberger, 1983; Steinberg, Blinde, & Chan, 1984). Other important predictor variables included grade retention (Jimmerson, Anderson, & Whipple, 2002) and school climate (Rumberger, 2003). According to Rumberger and Larson (1998), student mobility is also an important variable when trying to predict who will drop out of school. Because dropping out of high school is such a complex

issue, it is important for this study to look closely at one predictor, student mobility, in order to understand the phenomenon as a whole. The predictive variable of academic failure falls in to both categories because it reflects both individual and social predictors. Individual students as well as the caregivers of these students may have negative academic experiences that can lead them to devalue education (Kaplan et al., 1997). If the experience of academic failure resides in the student, the student may develop a negative attitude towards education. If the experience of academic failure resides in the caregiver, the student may grow up in an environment that devalues education; thus, the social network influences the at-risk student and shapes how they think of education (Kaplan et al., 1997).

Student Mobility

Student mobility is an important predictive variable for dropping out of high school and makes prevention more complex (Rumberger & Larson, 1998). Student mobility includes students moving residences and thus changing schools as well as students changing schools without changing residences (Rumberger & Larson, 1998). . Rumberger and Larson (1998) studied the complexity of mobility research and discovered that 40% of primary school students who changed schools did not change residences (Rumberger & Larson, 1998; Rumberger, 2003). Rumberger (2003) asserts that the study of student mobility is complex because of the varied reasons students are mobile. As a predictive variable for dropping out of high school, student mobility falls into both individual predictive and social predictive categories.

Researchers have explored individual predictors as well as societal predictors in the student mobility literature (Sorin & Iloste, 2006; Rumberger, 2008). While researching student mobility issues in Australia, Sorin and Iloste (2006) address the issues of mobility as being both family-based and school-based. Family-based reasons may include changes in employment,

ability to pay rent, divorce or death, parent incarceration, or the decision and ability to move up socially (Sorin & Iloste, 2006). Family- based reasons lead to students dropping out because of socioeconomic factors that destabilize home environments. Sorin and Iloste (2006) also mention the school -based reasons for mobility as relating to student engagement, achievement, and safety. These reasons include strict policy and procedures that include suspension and expulsion and lead to changing schools involuntarily (zero tolerance procedures). These school -based issues lead to more students dropping out of school because they feel pressure from school administration to do so.

The Present Study

This study is based on the potential of schools to meet the complex needs of mobile students. Specifically, this qualitative study will focus on how one virtual school helps mobile students. Because of the relative newness of virtual schools and the challenges faced by mobile students, this study intends to help researchers and practitioners understand how schools have an opportunity to help mobile students.

Problem Statement

Dropping out of high school

Christle, Jolivet, and Nelson (2007) discuss that the high school dropout rate in the United States has stayed steady at around 11% for thirty years or so; this is roughly 1.8 million students a year who drop out of high school (National Council of Education Statistics, 2014). According to Rumberger, (1983), “The problem of dropping out is by no means a simple one that can be treated with simple solutions” (pg. 211). There are many consequences associated with dropping out of high school. Those without a high school education are more likely to have lower earnings than those with at least a high school education (Markey 1988; Rumberger 1987;

U.S. General Accounting Office, 1986; U.S. Department of Commerce 1986). While most research on dropping out of high school has focused on test scores, retention, income level, school engagement, and race (Christle et al., 2007; Cratty, 2012; Garnier, Stein, & Jacobs, 1997; Greene, 2001), there have been other explorations of the complex reasons and consequences of dropping out of school.

In a landmark study, Sum, Kahtiawada, McLaughlin, and Palma (2009) conducted research on the consequences of high school dropouts on both the individual and society. Through examining records and longitudinal data, they determined that there were five main long term consequences of dropping out of high school (a) low employment rates, (b) teen and young parenting, (c) high incarceration rates, (d) income inadequacy, and (e) low lifetime net fiscal contributions. These consequences demonstrate the societal damage that can be created by because of this problem.

Dropout Rates. Chapman and Hoffman (2007) reported that for the 2002-2003 school year, national dropout rates were between 1.8% and 8.5%. For the 2003-2004 school year, national dropout rates were between 1.8% and 7.9%. In longitudinal research conducted by the National Council of Education Statistics (NCES) (2014), by following a class from 1988 to 2000, researchers determined that 63% of the cohort that dropped out at least once got a diploma by 2000. This information is significant because it shows a number of students who previously dropped out of high school are going back to get their diploma.

One aspect missing in much of literature is how the dropout rate was calculated for the studies included. There are several different calculations used to determine the dropout rate, and this often leads to rate differences. According to Chapman and Hoffman (2007), the event dropout rate is the number of students who dropped out of school divided by the number of

students enrolled at the beginning of the year. This formula is used most often by the U.S. Department of Education and states' Departments of Education. Statistical agencies like the NCES use status dropout rates. Status dropout rates report the percent of individual students in an age range who have not earned a high school diploma or are not in school. The calculation of status drop out rates is often used to study general population issues outside of education such as incarceration and unemployment (Laird, DeBell, & Chapman, 2006).

While the dropout rate data may appear inconsistent at first glance, it is important to remember that often these rates are based on who collected the data and why. The U.S. Department of Education is most interested in keeping track of how many students were in school at the beginning of a school year but who are not in school at the end of the same school year; thus, they use the event dropout rate. Statistical agencies such as the U.S. Census Bureau and the NCES often uses the event dropout rate because it identifies the dropout rate based on everyone in a certain age group that did not finish high school.

Status dropout rates are stronger calculations because these reflect a wider population. The complex nature of understanding the dropout phenomenon demands researchers examine all factors, rates, consequences, and how the rate can affect the needed research (Rumberger 2003).

Student Mobility

Though sparse, there has been research investigating the relationship between student mobility and dropping out of school (Osher, Morrison, & Bailey, 2003; Rumberger & Larson, 1998). Two major studies conducted in this area found correlations between mobility and dropping out of school (Rumberger & Larson, 1998; Osher et al., 2003). Rumberger and Larson (1998) found that student mobility does increase the risk of dropping out of high school. They

concluded that the connection between the two often comes from a lack of school engagement. Osher et al. (2003) looked specifically at emotional and behavior disorders (EBD) and the relationship between those disorders of high student mobility, and the risk for dropping out of school. They discovered that EBD students change classrooms and schools often, and this leads to an increase in these same students dropping out of high school. Both studies indicate a relationship between student mobility and dropping out of high school.

Previous research has found that mobile students often experience both academic and social problems (Benson, Haycraft, & Weigel., 1979; Crocket, Peterson, Graber, Schulenberg, Ebata., 1989; Holland, Kaplan, & Davis, 1974; Jason, Weine, Johnson, Warren-Sohlberg, Filippelli, & Turner., 1992). Highly mobile students have difficulty coping with frequent school changes and adaption to a new school environment (Holland et al., 1974). Children in families who move frequently were found to be more likely to experience behavioral and psychological problems than children in families who did not move frequently (Simpson & Fowler, 1994). Thompson, Meyers, and Oshima (2011) discussed the negative impact of student mobility on a school's adequate yearly progress (AYP). Previously, Audette and Algonzzine (2000) found that schools with a high number of mobile students that transferred schools within the district had lower AYP and other negative correlations with regard to reading and math achievement. Thompson et al. (2011) had similar findings.

Different aspects on the effect of student mobility have been explored in the literature (Rumberger & Larson, 1998). This includes the impact of mobility on student behavior, academic and school effects, and social effects. In a landmark longitudinal study, Rumberger and Larson (1998) found that high student mobility had a negative impact on many areas including academic and school related issues. One major issue explored by researchers is the use

of mobility as a predictor of dropping out of school. Research indicates that students who changed schools more than one time during their school years were more likely to drop out of school when they reached the tenth grade (Astone & McLanahan, 1994; Rumberger & Larson, 1998).

Rumberger (2003), and Mantzicopoulos and Knuston (2000) discuss the two types of mobility: residential and school. Residential mobility is when students change residences and have to change schools. School mobility is when students change schools without changing residences. In their longitudinal study of student mobility, Mantzicopoulos and Knuston (2000) also found that 48% of the participants said they moved homes within eleven months, and 65.6% reported they moved to seek a better living arrangements within the same school district. The researchers also found that students that changed schools between kindergarten and 2nd grade scored lower overall on standardized achievement tests during their school years.

Negative impact of mobility. Mobility can negatively impact schools and individual students (Osher et al., 2003; Rumberger & Larson, 1998). Regarding the individual student, Osher, et al. (2003) conducted a study that looked specifically at students with emotional and behavioral disorders. They found that while mobility did not cause student behavior problems, there was a correlation between mobility and students with behavior problems. These researchers hypothesized that it may be because of a lack of ability to adapt to new school surroundings quickly, or being forced from their school because of earlier behavior problems. Rumberger and Larson (1998) point to their findings that students who had behavior problems in 8th grade were 40% more likely to change high schools at some point.

Highly mobile students have other risk factors that can lead to less academic achievement. Many researchers have found that the socio economic status (SES) of a student has

a greater impact on school achievement than does mobility, but mobility is still an important factor when looking at the struggling student holistically (Temple & Reynolds, 1999; Heinlein & Shinn, 2000; Nelson, Simoni, & Adelman, 1996). As far back as the 1970's, researchers found that highly mobile or transfer students experience academic achievement problems and that younger mobile students have fewer problems with the adjustment than older mobile students (Crocket et al., 1989; Holland et al., 1974; Jason et al., 1992). Holland, Kaplan, and Davis (1974) also found that mobility can have psychological and academic consequences and that mobile students have difficulty coping with the change and adapting to a new school environment.

There are several other consequences that have been explored in the research. Sorin and Iloste (2006) cite lower academic achievement and the difficulty of not having a standardized curriculum as major consequences of student mobility. Rumberger and Larson (1998) found that between 50% and 100% of students who moved at least six times by eighteen years old were developmentally delayed (pg. 2) later in their schooling. Other consequences identified include how high student mobility can affect adequate yearly progress (AYP) scores at the school and district level (Thompson et al., 2011), and the negative effect mobility has on student attendance (Nelson, Simoni, & Adelman, 1996). Thompson et al. (2011) discussed that because the AYP scores include mobility rates and graduate rates in the calculation, those schools with high mobility rates have a low graduation rate and difficulty getting a high AYP score when this is used as a criteria in assessing school effectiveness. In an earlier study, Kerbow (1996) found that mobility and school changes have a lasting effect on the student. The researchers found that many times the student's academic achievement can be a year behind their non-mobile peers.

Mobility rates are highest in school districts with a high percentage of students living in poverty, and on military bases where frequent, mandated moves are common; this means mobile students often include minorities (Rumberger & Larson, 1998) as well as homeless and unaccompanied youth (Weisman, 2012). Alexander, Entwisle, and Dauber (1996) conducted a five year study on mobility. They concluded that between 13% and 22% of students in urban schools relocated at some point during the year, and that around 14% of students who moved residences did so more than one time. For the students who moved more than one time, there were instances of low academic progress in early grades (Alexander et al., 1996).

In their landmark study, Rumberger and Larson (1998) found that mobility is higher among black, Latino, poor children, and Native American children than among Asian, white, and middle to upper income children (see also Rumberger, 2003). Using school district data, Parke and Kanyongo (2012) found that SES had a greater impact on student mobility than ethnicity. They also found that mobility patterns were similar between low SES black and white students in elementary and middle school, but SES had less effect in high school. The high schools the researchers visited showed the standardized test means for students who were mobile were lower than those for students who were not mobile (Parke & Kanyongo, 2012).

According to Rumberger and Larson (1998), high SES students were less likely to drop out of high school, but were more likely to change high schools. There are several possibilities as to why this may be. As previous researchers have discussed, low SES students move more because of housing and employment issues (Rumberger & Larson, 1998; Rumberger, 2003; Parke and Kanyongo, 2012). Family situations of low SES students such as unemployment and single parenting have the potential for more frequent moves of residences. While examining the growing education gap between rich and poor, Tavernise (2012) discusses how the gap between

white and black students has narrowed and the gap between rich and poor students has widened. Education inequity plays a large part in highly mobile students not graduating high school and entering and finishing college (Reardon, 2011). The more a lower SES student changes schools, the more likely it is that the student will face educational inequity (Rumberger & Larson, 1998; Rumberger 2003).

Help for highly mobile students. In recent decades, virtual schools have become a possible solution to helping mobile students. Virtual schools allow students the opportunity to work on school from almost any place with computer access. As Barth, Hull, and St. Andrie (2012) point out, online education has the potential to “transform instruction and provide the 21st century education our students need” (pg. 2). Barth et al (2012) also discuss that while policymakers and education leaders need to make sure online learning has accountability for rigor and student results, it still offers a viable option for those students who cannot find success on a regular high school completion path. This is especially important for students who are mobile regardless of which type of mobility they experience. Virtual schools provide the opportunity for highly mobile students, whether experiencing residential or school mobility, to attend school.

The national problem of schools not having the tools to help mobile students is explored in this research. Through examining what one virtual school is doing to help mobile students, the current research will contribute to the overall knowledge and theory base; it will also add to the literature on both mobility and school disengagement. The findings of this study may impact school districts, teachers, and policy makers by an example of what can be done to successfully help mobile students.

The overall objective of this research is to gain further understanding of student mobility and how one virtual high school offers mobile students the opportunity to complete courses.

The research questions driving the proposed study are:

1. In what ways is mobility represented in a virtual school in an urban school district located in the Midwest?
2. How does this virtual school meet the needs of mobile students?

Theoretical Framework

This study focuses on what percentage of students are mobile at one virtual school in an urban district in the southeast and what that virtual school is doing to help mobile students. One assumption guiding this research is the potential of virtual schools to serve mobile students. This assumption is guided by Institutional Theory (Rumberger, 2001) and Academic Mediation Theory (Vygotsky, 1978). Institutional Theory discusses the role school personnel play in students dropping out of high school while Academic Mediation Theory establishes the ways in which teachers and schools can work to support academic success. Both theories and their relevance to this study are discussed below.

Institutional Theory

There are many complex reasons students drop out of high school. Rumberger (2001) points to one way of understanding the phenomenon of dropping out of high school is to investigate it through an institutional framework. Rumberger (2001) found schools had different practices when dealing with students at risk of dropping out, regardless of why the students were at risk (ex. Mobility, poor academic performance, absenteeism). Even though the 247 schools in the study had a similar dropout rate, Rumberger found that the schools' practices directly determined this rate.

Much of the research investigating how schools influence a student's decision to drop out suggests there are two ways a school effects a student's decision to leave school: directly and indirectly (Rumberger, 2001; Finn, 1989; Wehlage, Rutter, Smith, Lesko, and Fernandez, 1989). Directly, schools have explicit policies that lead to student turnover. These policies may include a student being over age, poor attendance, poor academic performance, zero tolerance policies, and general student misbehavior that can lead to suspensions and expulsions. These school initiated policies lead to students involuntarily withdrawing from school. Indirectly, students may decide to voluntarily leave school because of general policies in place that impede their engagement with the school. Indirect policies include school mandated class sizes, number of advanced course offerings, and transportation policies.

In his research, Rumberger (2001) discusses that it is the school policies and practices that hold the most promise in understanding the ways in which schools influence students dropping out. Academic and social climate can help predict dropout rates based on attendance rates, number of students taking advanced courses, and student perceptions of the school (Rumberger, 1995; Rumberger & Thomas, 2000). These findings appear to be the case even when controlled for student backgrounds and the overall SES of the school. Institutional Theory informs this study by providing a starting point in which to understand how the studied virtual school benefits students who are mobile. This theoretical framework will help develop a deep understanding of how an institution, in this case a virtual school, can help mobile students.

Academic Mediation Theory

Students at risk for dropping out of school often make the decision because they do not feel successful academically (Rumberger 2003). Academic Mediation Theory explores how students learn and what can be done to help students achieve academically (Vygotsky, 1978).

Mediation comes in four forms: objects (ex. textbooks), symbolic tools (ex. language), organized activities (ex. classroom tasks), and human beings (ex. teachers, peers). Objects and symbolic tools often go together to help the student learn in a way that may be more beneficial to them.

Activities and human beings play a larger role in mediating academic achievement.

Differentiated education can be achieved using activities and human beings, teachers and other students, are there to help students improve academically when needed (Vygotsky, 1978). All four forms allow students to receive the help they need to improve academically. Researchers have established the importance of mediation when trying to combat the problem of students dropping out of high school because of academic failure (Bachman, Green, & Wirtanen, 1971; Cairns, Cairns, & Neckerman. 1989; Ekstrom, Goertz, Pollack, & Rock, 1986).

Both Institutional Theory and Academic Mediation Theory inform this study by looking at ways a school, in this case a virtual school, can help mobile students regardless of the reason they are mobile or past school experiences. Institutional Theory (Rumberger, 2001) was used to keep a focus on the school as an organization. Academic Mediation Theory was used to keep a focus on the way teachers and administrators supported students' academic progress.

Conclusion

This section serves as an introduction to the complex problem of mobile students, and their risk for dropping out of high school. While research indicates that schools can have both a direct and indirect effect on students at risk for dropping out of high school, this complex problem is in need of more study. This study will help inform district leadership and influence the education practice by establishing the percentage of mobile students attending one virtual school and focusing on the ways in which this virtual school works to support students despite their mobility.

Chapter 2 - Literature Review

This study explores not only the increased risk of mobile students dropping out of high school, but also how one virtual high school is helping mobile students. Using both Institutional Theory and Academic Mediation Theory, I will explore how a virtual school helps give mobile student who may be at-risk for dropping out an alternative to a mainstream school. Based on work from Rumberger and Larson (1998) and others (Christenson & Thrulow, 2004; Christenson, Sinclair, Lehr, & Godber, 2001) have hypothesized that student mobility is a significant predictor in determining who is at risk for dropping out of high school. Just as student mobility and dropping out of high school are complex issues, there are many things that need to be explored as part of the phenomenon of dropping out of high school. The goal of this chapter is to understand the complexities of dropping out of high school and the component of student mobility. This chapter will discuss: the process of dropping out of school, the role and impacts of student mobility, how alternative schools provide an education option for at-risk students, and the advent of virtual schools as a relatively new form of alternative education.

Dropping Out of School

Christenson and Thrulow (2004) discuss the complex problem of dropping out of school as one that cannot be examined in isolation from the context in which it lies because students who drop out of high school do so for many different reasons (Janosz, LeBlanc, Boulerice, & Termblay, 1997). The decision to leave school happens over time and is viewed as a process (Christenson & Thrulow, 2004; Rumberger & Larson, 1998). Leaving school is often an outcome of a long process of general disengagement from school (Christenson et al., 2001).

The majority of drop out research concentrates on single predictors such as cognitive ability, retention, attendance, and course failures (Barrington & Hendricks, 1989; Cairns et al.,

1989; Entwisle & Hayduk, 1988; Holmes, 1989; Smith & Shepard, 1988). Research also exists that explores what part the school itself plays in the phenomena of dropping out of school.

Kaplan et al. (1997) found that negative academic experiences and school failure have a significant impact on how students feel about themselves and the ways in which they feel rejected by and at their school. This work supports earlier research from Ekstrom et al. (1986) that concluded that dropouts are more likely to report they feeling alienated from the school before they drop out.

McNeal (1997) explored what part a school can play in a student's decision to drop out. He concluded that school size can be a predictor dropping out because there are fewer interactions between students and teachers in a large school, and there is an increase in the level of isolation a student may feel. Microsystems of home and school were studied by Bowen and Bowen (1998), and they found that teacher support had a direct positive effect on investment in education by an individual, and also higher achievement. It was also determined that students who were at risk often got little support from their teachers.

Push out Theory (Jordan, Lara, & McPartland, 1996) is often investigated as a part of Institutional Theory (Rumberger, 2001) because "pushing out" a student is one way a school hinders that student. Push out Theory identifies how specific school processes and practices discourage students from completing high school. Many of these similar theories focus on policies of the school that make it unwelcoming and diminish the connection to the school such as low academic performance, a large number of absences, and misbehavior (Jordan, Lara, & McPartland, 1996).

The people and systems within a school have influence on not only if the student leaves, but how the student leaves. Students who drop out of high school either leave voluntarily or

involuntarily (Glennie, Bonneau, Vandellen, & Dodge, 2012). Voluntary withdrawal usually takes place as a result of school climate, home life, and early teen pregnancy. If a student involuntarily withdraws from school, it is often because of long term and frequent suspensions, expulsions, or alternative school placements. Sometimes, students voluntarily withdraw from school because their life situation is such that they have to work. Research has found that a significant number of high school students work for pay before they graduate from high school (Bachman & Schulenburg, 1992; Hotz, Xu, Tienda, & Ahituv, 1999; Manning, 1990; Steinberg & Cauffman, 1995). This research has found that many schools are not set up to accommodate students that have to work to support themselves or family members. The inability of schools to accommodate students who must have employment can often lead to these students dropping out of high school.

Accountability demands on schools are another factor in students dropping out of high school. Weisman and Paley (2007) found that No Child Left Behind has adversely affected schools because of the pressure for all students to perform at a high level regardless of background, struggles, or cognitive ability. Thomas and Dale (2006) found a relationship between large school systems such as Baltimore, Cleveland, Atlanta, and Oakland and a large percentage of students dropping out of high school due to high stakes accountability standards connected to graduation. Often this type of high stakes testing can mean that a student does not graduate high school if they do not pass a particular test, regardless of grades or behavior in school. Carnoy and Loeb (2002) found that states that have student level competency exams have higher dropout rates than states that do not. Schools that are already at risk for a high number of drop outs can be further negatively impacted by these accountability practices (McDill, Natriello, & Pallas, 1986).

Predictors of dropping out of high school. There are few controlled studies in this research area, but there are studies that attempt to predict those who may drop out of school (Lehr, Hanson, Sinclair, & Christenson, 2003). According to Finn (1989) there are two kinds of predictors when conducting research on student drop out: status predictors and behavioral predictors. Status predictors like socioeconomic status (SES) are difficult for practitioners to change. Behavioral predictors such as suspensions and school failures provide insight into possibilities for drop out prevention (Finn, 1989).

Race and ethnicity are important status predictors to consider. Rumberger (1987) found that dropout rates vary between races and ethnicities. Tenth grade seems to be a critical point researchers use when studying minority dropouts (Battin-Pearson, Newcomb, Abbot, Hill, Catalano, & Hawkins, 2000). Rumberger and Ah Lim (2008) discuss the literature as a whole in regard to when a student drops out of school and found that because dropping out is a process of disengagement by the student, tenth grade seems to be the time they make the final determination to drop out of school. In many states, this is around the age it becomes legal to drop out of school. The dropout rate is higher for minorities, males, and those from lower SES levels. Some researchers have determined that many minority students drop out before they even reach high school (Oetting & Beauvais, 1990; U.S. Bureau of the Census, 1990, Table 7).

One of the earliest predictors of dropping out of school studied by researchers is grade retention. The first major study was by Stroup and Robins (1972) and they found that grade retention is one of the strongest early predictors for students dropping out of high school because of retained students' early negative experiences in school. Lloyd (1978) studied the characteristics of third grade students who later dropped out of high school and concluded that dropouts were more likely to be retained in grades below third grade. Barro and Kolstad (1987)

found that a student being retained in an early grade increased their risk of dropping out by 30% to 50%.

Family status as it relates to parent involvement has been a heavily studied predictor (Rumberger, 1983; Bachman et al., 1969; Manski, Sandefur, McLanahan, & Powers, 1992). Rumberger (1983) concluded early on in his research that the influence of family background was found to be significant. Living with both parents decreases the odds of dropping out of high school (Bachman et al., 1969; Manski et al., 1992). Rumberger et al. (1990) found that children from fractured families often receive less supervision by their parents which often leads to those students being influenced by deviant peers. Astone and McLanahan (1991) found that children who do not live with both of their parents do not receive the same amount of encouragement with their schoolwork from both of their parents.

Behavior predictors are predictors that can typically be changed by some sort of external or internal force (Deci & Ryan, 1985). Behavior relies on perceived competence and autonomy (Wiest, Wong, Cervantes, Craik & Kreil, 2001). An early theory by Deci and Ryan (1985) can offer researchers a means for understanding behavior and how it can influence an at risk student to drop out. The theory states that human beings want to act in a competent manner to reach their goals and fulfill their needs. According to Deci and Ryan (1985), this is done in two steps: when the person knows the behaviors that will have successful outcomes for them, and two, the person feels able to do those behaviors. It is this basic understanding of behavior that can help drop out researchers work on addressing those behaviors that can lead to a student dropping out. With this two-part framework in mind, researchers (Wiest, Wong, Cervantes, Craik & Kreil, 2001; Deci & Ryan, 1985) have focused on four behavioral predictors in the literature: (a) middle school being a defining time in determining the risk for a student to drop out, (b) early

delinquent behavior and adolescent peer relationships, (c) self-determined motivation, and (d) early drug use.

Self-determined motivation is an important part of preventing students from dropping out of school. Vallerand, Frontier, and Guay (1997) found that students who dropped out of high school had lower levels of motivation and were highly amotive with regard to activities within and outside of school. Deci and Ryan (2000) determined that amotivation is the lowest level of self-determination, and according to Vallerand and Ratelle (2002) it is these amotivated students that do not believe studying or participating can change their academic outcome. These students drop out of school as soon as they can. Research examining the relationship between motivation and dropping out of school, Alivernini and Lucidi (2011) discussed student motivation using self-determination theory as a base. The researchers discussed these in context with previous studies on motivation in relation to dropping out of school, and they concluded that students who are amotivated and unsupported are more likely to drop out of high school. According to Deci, Vallerand, Pelletier, and Ryan (1991), a student who uses self-determined motivation is influenced at school and at home because these students tend to get support from both places. They concluded that parents who are supportive of autonomy instead of having a controlling attitude with their children influence the child's degree of self-regulation and therefore their self-motivation.

Hawkins, Jacquard, and Needle (2013) found that students at risk for dropping out of school displayed delinquent behavior in middle school. The researchers also found that problem behaviors in middle school affect the process of dropping out along with early sexual behavior and smoking (Hawkins et al., 2013). Cairns et al. (1989) determined that students that displayed aggressive behavior in middle school are at a greater risk to drop out of school; they are also at a

greater risk to drop out as early as 7th grade. In this same study, the researchers found that over 80% of males and 47% of females who eventually dropped out had previous instances of aggressive behavior and low academic performance in 7th grade.

An early research area on at risk students looked at how early delinquent behavior can be used as a predictor of dropping out of high school. Research from as far back as 1985 showed 60% of all jail inmates in the United States had not completed all of high school (U.S. Department of Commerce, 1987; Berlin and Sum, 1988). Later research had mixed outcomes when studying the link between delinquent behavior and dropping out of school. McGee and Newcomb (1992) generated General Deviance Theory that supported a relationship between deviant behavior and dropping out of school. They also found that delinquent attitudes of students could be easily associated with overall low academic performance. Building on the work of McGee and Newcomb (1992), Battin-Pearson et al. (2000) linked delinquent behavior and attitudes with dropping out of high school. The researchers also discovered that low academic achievement and bonding to antisocial peers had a correlation to being at risk for dropping out of school. Walters and Bowen (1997) took a social competency perspective during their research and found that students who were part of a positive peer group successfully had overall academic performance. They also found that despite past research, peer relationships in general had less of an effect on academic progress itself. Earlier research by Rumberger (1983) determined, “A student’s peer group will almost certainly be a powerful influence on attitudes and behaviors in school, since status and acceptance from others in the same age group become very important from early adolescence through young adulthood” (pg. 32-33). Walters and Bowen (1997) also found that social workers who helped at risk students develop positive peer relationships saw students avoid getting in trouble while at school.

Mensch and Kandel (1988) explored the link between dropping out of school and early drug use and found that high school dropouts reported more use and involvement with cigarettes and drugs than did high school graduates. Elickson et al. (1998) later examined early drug use as a predictor for dropping out of school and found that while there was a correlation between drug use and dropping out of school, there was not a significant correlation between early alcohol use and dropping out of school.

The research has established dropping out of school as a complex phenomenon consisting of potentially interrelated factors (Rumberger & Ah Lim, 2008). It is important to understand the history of drop out predictors in order to understand the one predictor that is used in this study. The present study limited the focus to one predictor: student mobility. Mobility is a status predictor that can have social and academic ramifications for students. The following section discusses mobility and the impact of mobility on dropping out.

Student Mobility

Previous research on mobility has found that mobile students experience both academic and social problems because of their mobility (Benson et al., 1979; Crocket et al., 1989; Holland et al., 1974; Jason et al., 1992). As early as 1974, Holland et al. (1974) explored the effect of mobility on students. Research on mobility really took off in the 1990's and one of the major findings to come out of that research was that families and children who move frequently were more likely to experience behavioral and psychological problems than children in families who did not move frequently (Simpson & Fowler, 1994; Wood, Halton, Scarlata, Newacheck, & Nessim, 1993). In the 2000's, the correlation between mobility and annual yearly progress (AYP) was researched, and it was found that schools with high numbers of mobile students that transferred schools within the district had lower AYP and that there were negative correlations

with regard to reading and math achievement and the mobile student (Audette & Algonzzine, 2000). Eleven years later, Thompson et al. (2011) had similar findings when researching the negative impact of student mobility on a school's AYP. Sorin and Iloste (2006) researched the complex problem of mobility and determined that major changes to the family such as divorce, parent incarceration, and rent problems are dominating reasons for high mobility. The researchers also found that those with a low family income transfer within the district because of trouble obtaining and keeping housing.

Several predictors of dropping out of school can also predict mobility. Students from single-parent and blended families are more likely to change schools and drop out of school than students with two parent households (Rumberger & Larson, 1998). Based on this research, Tucker, Marx, and Long (1998) found that single parent and blended families have a higher rate of moving residences. Most often when a family moves residences, they also move schools (Lee & Burkam, 1992; Rumberger & Larson, 1998). Conger and Finkelstein (2003) studied the impact of mobility on foster care children and found that overall, they make more school changes because they are more mobile. Rumberger (2003) described mobility as a symptom of students dropping out of high school, and not the cause. In their longitudinal study of student mobility, Mantzicopoulos and Knuston (2000) found that 48% of the participants reported moving residences within the span of eleven months, with 65.5% moving to seek a better home within the same school district.

Rumberger (2003) found that there is a strong correlation between student mobility and graduating from high school. In this research, even when controlling for family background variables, student mobility was shown to greatly reduce the odds of high school completion. Two studies found a student moving schools between 1st and 8th grades, and 8th and 10th grades

increased the probability of that student dropping out of school by the 10th grade (Rumberger, 1995; Teachman, Paasch, & Carver, 1996). These studies demonstrate not only how students who are mobile are more likely to drop out of high school, but also shows the importance of intervention for mobile students before the 10th grade.

The correlation between mobility and dropping out of school has been heavily researched since 1994 (US Government Accounting Office, 2014). This federal report highlighted the negative impact on students who change schools and residences frequently. Since then, the different effects of student mobility have been explored in the literature. Mobility impacts many aspects of a student's life: behavior, academic and school effects, and social effects. Rumberger and Larson (1998) conducted a landmark longitudinal study and found that high student mobility had a negative impact on many areas of a student's life, including academic and school related issues.

Research conducted by Smrekar and Owens (2003) highlighted the experiences of military families. This work established how parental job requirements were a reason for student mobility. While the researchers looked closely at Department of Defense schools, they discussed that one reason the Department of Defense schools have such high achievement is because they have found solutions to the unique situation of their mobility. These solutions include a stable teacher workforce, a standardized curriculum, and a lack of strict rules regarding record transfers. While the military has a student body that is highly mobile, they have processes in place to lessen the impact of mobility on the student. Department of Defense schools do not have the same negative impacts from mobility and provide an example of how school systems in the civilian world may be able to help mobile students.

Institutional Theory can help researchers understand the relationship between schools and mobile students. Schools in large urban districts have a higher rate of mobility than do smaller districts (Rumberger & Larson, 1998). Policies like Zero Tolerance policies of then times have a direct effect on students and cause mobile students to leave school early. Indirectly, schools affect mobility through policies and practices that may lead a student to voluntarily leave school such as school climate and teachers or administrator expectations (Rumberger, 2003).

The impact of high student mobility. In order to understand more about mobility, it is important to understand the impact mobility has on students, schools, and society.

Mobile students have risk factors that can lead to low academic achievement. Mehana and Reynolds (2004) explored student mobility and the effect it has on achievement. For their research, they defined mobility as any change in schools between kindergarten and sixth grade and included expected and unexpected moves. They found high mobility students have trouble in school because high mobility introduces discontinuity in their learning environment. When researchers study mobile students, they find that the SES of a student has a greater impact on the achievement of that student than does mobility; however, the majority of mobile student come from low SES (Sorin & Ilost, 2006). Mobility has been found to be an important factor when looking holistically at a student who struggles academically (Temple & Reynolds, 1999; Heinlein & Shinn, 2000; Nelson et al., 1996). Holland et al. (1974) found that mobility can have both psychological and academic consequences and that highly mobile students have difficulty coping with the change and adapting to a new school environments repeatedly.

The relationship between mobility and school choice is a relatively new area of research. A study by Cowen, Toma, and Torske (2013) investigated rural school systems in Kentucky and how students transfer from one rural district to another because there is a lack of school choice.

Their findings indicate that lower performing students have more mobility and a higher transfer rate. They also found that regardless of when or for what reasons a student changes schools, the mobility has a negative impact on their academic achievement because they have to adapt to a new school culture each time they transfer (Cowen et al., 2013).

Rumberger and Larson (1998) explored the positive and negative aspects of mobility and discussed how some types of mobility can be positive for the student. An example of a positive impact mobility may have on a student is when that student transfers from a low performing school to a high performing school. Conversely, a negative impact mobility may have on a student is if the student leaves a school because they have academic or social problems with their peers or school staff (Rumberger & Larson, 1998). They discuss how a factor can have a positive or negative effect on mobility and that it depends on the reasons for the move or transfer.

Earlier research discussed how younger students have fewer problems adjusting to school changes than older students (Benson et al., 1979; Crocket et al., 1989; Holland et al., 1974; Jason et al., 1992). However, Alexander, Entwisle, and Dauber (1996) found that changing schools can negatively impact school performance in the elementary grades. Because changing schools makes school adjustment more difficult, academic progress is slowed. Previous research corroborated this finding by describing the primary grades as associated with the most negative consequences of mobility (Blane, 1985; Ingersoll, Scamman, & Eckerly, 1989). This research speaks to the importance of early grade intervention, before grade three with mobile students.

The link between student mobility and classroom behavior has been shown in studies on mobility (Hendershott, 1989; Vial, 1996). It was found that changing schools, especially during the elementary years increases behavior problems in high school by 20% (Ellickson &

McGuigan, 2000). Swanson and Schneider (1999) found that students who change schools during the first two years of high school are less likely to have behavior problems than mobile students who change schools in the last two years of high school. This goes along with the finding by Rumberger and Larson (1998) that some students have been forced to change schools because of behavior problems or disagreements with previous school administration. Regarding the individual student, Osher et al. (2003) studied students with emotional and behavioral disorders. They found that while the relationship between mobility and behavior problems was not causal, there was a correlation between the two. The researchers hypothesized that it may be because of a lack of ability for students to adapt to new school surroundings, or that the student was forced from their school because of earlier behavior problems.

Alternative Schooling

Alternative schooling can be traced as far back as Dewey's 1939 view on progressive education (Sekavi, 2001). The National Center for Education Statistics (NCES, 2001) conducted a national study of public alternative schools and found they served around 612,900 students in the United States during the 2000-2001 school year. At the time, only 39% of school districts offered alternative schools, but the number seems to grow every year (NCES, 2001). Alternative schools became popular in the 1950s as a way to help students who were behind in their mainstream school (Quinn, Poirer, Faller, Gable, & Tonelson, 2006; Tissington, 2006; Turnton, Umbreit, & Mathur, 2011). While beginning in urban districts, alternative schools eventually flowed into the suburbs as a way to reinvent the education system (Quinn et al., 2006). Alternative schools gained momentum in the 1980s and mostly made up of charter and voucher schools which were new concepts at the time (Kim & Tatlor, 2008).

Rumberger (1983, 2003) has studied mobility extensively and how it relates to dropping out of school. An area of research he has explored has been how alternative schooling helps mobile students. Virtual schools are alternative schools because they offer an alternative to mainstream school offerings.

An accepted definition for alternative schools in the literature is, “a public elementary or secondary schools that addresses the needs of students that typically cannot be met in a regular school or falls outside the categories of regular, special education, or vocational education (Lehr & Lange, 2003, p. 59). Marsh and Willis (2003) investigated alternative schools and found that they are based on the idea that some students, especially those at risk for dropping out respond better to a different structure in school. It is estimated that around 2% of high school students are enrolled in alternative schools across the United States, mostly located in urban school districts with a higher number of minority students (Grunbaum, Kann, Kinchen, Ross, Gowda, Collins, & Kolbe, 2000).

Regardless of the type, an alternative school needs three things to be successful: (a) to be located in a standalone facility which in no way is connected to a mainstream school building, (b) to offer work-study opportunities, and (c) administrators that continually promote the schools success (Kellmayer, 1995). These characteristics are important in making sure the unique needs of the students are being met.

Alternative school types. There are three types of alternative schools Caroleo (2014) discusses: progressive innovation schools, last chance schools, and remedial intervention alternative schools. Progressive innovation schools fulfill the need to make school more challenging. Most of the time, these alternative schools are restructured in a manner that is intended to fix the school system and not the school student. Examples of this type of school

include charter schools and voucher schools which can be found mostly in urban school districts (Carleo, 2014). Last chance schools are schools that help students with behavior difficulties and act as an alternative to suspensions, expulsion, or incarceration. These schools focus on behavior modification. The third type of alternative school is what Caroleo (2014) calls remedial intervention schools which focus on remediation of an emotional or academic nature. These schools are designed for students at risk for academic failure and use nonpunitive methods and positive staff-student interactions. This type of school is often used in a drop out prevention capacity (Caroleo, 2014).

Most alternative schools share positive characteristics like effective instructional strategies, small class size, and an ability of the student to form relationships with peers and staff (Aron, 2006; Foley & Pang, 2006; Vadeboncoeur, 2009). Alternative schools are often caring and understanding environments and help students feel less isolated and more successful. Phelan (2008) and Raywid, (2001) based research off of research done by Roberts (1974) who discussed taking a humanistic approach to alternative schooling and having an alternative school that emphasizes positive student growth. These views are also echoed in the 1965 Elementary and Secondary Education Act (Chapter 1) which provides grants and entitlements for alternative education for those in need of it. School funding from Chapter 1 was designed as a part of the solution to students dropping out of school and failing academically (Land & Legter, 2002).

Virtual Schools. A virtual school is an alternative school that offers online courses (Harvey, Greer, Basham, & Hu, 2014) that students can complete from anywhere with an internet connection. Virtual schools are a new phenomenon overall and there is limited research associated with virtual schools. Harvey et al. (2014) are pioneers in this area of research and

investigated how virtual schools put policies in place to help students, even without face-to-face interaction with their peers or teachers.

The emerging state of virtual schools means there are not clear standardization models for virtual schools (Harvey et al., 2014; Barth et al., 2012; Miron, Horvitz, & Gulosino, 2013). The literature presents two models of virtual schools: hybrid and completely online learning (Harvey et al., 2014). A hybrid model is when the student works both online and with a teacher and peers face-to-face. A virtual school that is completely online includes no face-to-face interaction with teachers or peers. Many times in a completely online program, there is a teacher on the other end of the computer that facilitates the course and helps the student, but this is not always the case (Harvey et al., 2014; Barth et al., 2012; Miron, Horvitz, & Gulosino, 2013). There have been few qualitative research studies on these models, but one quantitative study exists that tries to measure the success or failure of a virtual school based on standardized test scores (Cavanaugh, Gillan, Kromrey, Hess, & Blomeyer, 2004). Cavanaugh et al (2004) found both models showed success with the hybrid model showing more success.

While the literature on virtual schools is sparse, The Center of Public Education compiled data on virtual schools and the types of entities that produce the majority of virtual schooling. Barth, Hull, and Adrie (2012) used this data for a study of K-12 virtual schools and discussed the entities, they included: (a) for profit companies, (b) nonprofit companies, and (c) state departments of education including individual districts within a state. The researchers noted that for profit companies often run charter schools that have a major virtual component to them, though some are completely virtual (Barth et al., 2012). Nonprofit companies offer online learning in the corporate world, often to meet the training needs of those organizations. State

departments of education have developed their own virtual high schools in order to help their students (Bath et al., 2012).

There are five types of interaction in a virtual school: (a) learner-instructor when the student engages somehow with an instructor, (b) learner-learner takes place when a learner does group work or works with another learner, (c) learner-content takes place when the learner is engaged with the content but does not need any other form of interaction, (d) learner-interface is when the learner works with a computer or other type of device to complete the tasks, and (e) vicarious interaction takes place when the learner engages a tutorial but is not receiving direct instruction at all times. Most literature looks at these five types of interaction as tools for student success in a virtual environment. There is no peer reviewed research on how these different interactions may help students build a relationship with their teacher they do not interact with face-to-face (Hillman, Willis, & Gunawardena, 1994; Moore, 1989).

There is very little literature on virtual schools at the K-12 level with a stronger literature base focusing on virtual schools at the college level. Miller, Rainer, and Corley (2003) investigated what student qualities might be able to measure engagement and participation in an online course in college. The qualities they examined were procrastination, isolation, and poor attendance. The researchers concluded that if the student perceived the personal computer or other delivery mechanism was easy to use, they would be more engaged in the course as a whole (Miller et al., 2003). Miron, Horvits, and Gulosino (2013) did study full time virtual schools at the high school level and found it difficult to gather data on virtual schools because there was so little information available. The researchers were able to use publically available data to determine how many virtual schools existed at the high school level and the number of students

enrolled. Using this data, they found that during the 2011-2012 school year, there were 311 fully virtual schools in the United States with nearly 200,000 students enrolled.

Podoll and Darcy (2005) explored the advantages and disadvantages of virtual schools. Researchers surveyed students who had taken virtual courses and discovered that lower SES students have limited ability to use the internet which often hinders their ability to complete virtual courses. Podoll and Darcy (2005) also discovered that the main concern of parents and students included problems with technology and timely communication from teachers. Researchers have been interested in the positive aspects of virtual education as well. Mupinga (2005) found one major benefit of virtual schools is that the alternative scheduling and asynchronicity can be compatible with working students, mobile students, and students with other risk factors for dropping out of school. Harvey et al. (2014) confirmed this finding when researchers surveyed virtual students and found that students identified the asynchronous environment as a central advantage to virtual schooling. These studies begin to explore virtual schools but there is still much work to be done.

Concerns about virtual schooling.

Concerns about alternative education and virtual schools have been explored in the literature (Sagor, 1999; Bryson, 2010; Lagana-Riorgan, Aguilar, Franklin, & Hopson, 2011). The largest concern is the potential for the virtual student to feel a sense of isolation because there is little to no face-to-face interaction.

Researchers such as Sagor (1999) and Bryson (2010) insist alternative schools, and especially virtual schools isolate students and therefore hinder the student's interpersonal skills.

These researchers found that the isolation also puts virtual school students at risk for falling behind students attending mainstream schools.

The great majority of literature does not share the concern about student isolation (Aron, 2006; Foley & Pang, 2006; Vadeboncoeur, 2009; De La Ossa, 2005). Aron (2006), Foley and Pang (2006), and Vadeboncoeur (2009) assert that the small classes of most alternative settings and the asynchronous environment of virtual settings are better for at risk students because these settings foster more one-on-one interactions. De La Ossa (2005) took this viewpoint when investigating the difference between an alternative school and a mainstream school; students frequently felt more lost and isolated in the mainstream schools than in the alternative schools they had attended.

Conclusion

This chapter established dropping out of high school as a result of a complex process. Student mobility was identified as a key predictor of student dropping out. Virtual schools were presented as a form of alternative schools that may be able to support mobile students. This qualitative study answers the following two research questions:

1. In what ways is mobility represented in a virtual school in an urban school district located in the Midwest?
2. How does this virtual school meet the needs of mobile students?

Chapter 3 – Methodology

Mobile students dropping out of high school continues to be a problem in both cities and rural areas in the United States (Rumberger 2003). It is important for educators to find ways in which to help students at risk for dropping out, graduate high school. Virtual schools have the

potential to help mobile students by providing courses that are accessible outside normal school hours.

There are many areas explored in the field of dropout prevention, including the use of technology to teach those who, for whatever reason, are not able to complete high school in a more traditional high school setting. Virtual school has continued to evolve based on the needs of students and communities with the goal of supporting at risk students (Rumberger 2003). Using a case study design, this study explored the percentage of mobile students attending a virtual school and the ways in which this same school supports these students. One goal of this research is to provide a deeper understanding of challenges that face students in a mobile environment, and some of the possible solutions to the problem. The purpose of this study is to investigate how a virtual high school is helping mobile students through the following two research questions:

1. In what ways is mobility represented in a virtual school in an urban school district located in the Midwest?
2. How does this virtual school meet the needs of mobile students?

Rationale for Qualitative Research and Case Study Design

This dissertation is a qualitative case study using one case. Yin (2014) defines case study as: (a) “a form of inquiry that investigates a contemporary phenomenon in depth and within its real world context”, (p. 16) and (b) “copes with the technically distinctive situation in which data needs to converge in a triangulating fashion and as another result benefits from the prior development of theoretical propositions to guide data collection and analysis” (p. 17). The second question in this study begins with the word "how". Yin (2014) discusses case study as

the best form of qualitative research method to use when the question being asked begins with how, and the phenomenon being investigated is contemporary, and how case study design needs to be carefully crafted. This study is best explored as a case study because the central phenomenon: mobile students attending a virtual school, is unique and cannot be separated from its contemporary context. Virtual high schools reflect a relatively new concept, not beginning until the widespread use of the internet was established, and one that does not have much research (Harvey et al., 2014; Barth et al., 2012; Miron, Horvitz, & Gulosino, 2013). Each virtual school is different from the others, which also lends this study to be a case study design.

Epistemological Assumptions

This investigation embodies a critical realist perspective (Maxwell, 2012). The critical realist tradition has become the most prominent manifestation of the overall philosophy of realism (Maxwell, 2012; Cook & Campbell, 1979). Critical realism is an approach to realism that separates ontology and epistemology. Ontologically, critical realism acknowledges the existence of a singular reality. Epistemologically, this reality is perceived differently by different people. Critical realism acknowledges that discovering reality depends on understanding the multiple perspectives understood by different individuals. Critical realism acknowledges there is no one way to see the world and that researchers must be open to many possibilities in what they study, and because there are so many different perspectives on a singular reality, all perspectives need to be understood to get the full picture. Using critical realism attempts to grasp the truth and complete an incomplete picture of what is being studied.

Critical realism was used because it is consistent with the aim of this study. Critical realism, as defined by Maxwell (2012), reflects why it is important to include multiple perspectives in this study. This perspective fits this study because it provides room to learn from

the experiences and perceptions of others. Therefore, critical realism embraces the range of factors related to student mobility, the range of needs this mobility creates (Rumberger 1983; Rumberger, 2003), and the range of interactions between each student and each teacher in the virtual school. Finally, critical realism embraces that the virtual school creates a single reality for students and teachers but that people view this reality differently. By embodying a critical realist perspective, this study acknowledges the role of one virtual school in creating a common reality for participants while acknowledging that discovering this reality requires discovering the multiple perspectives of participants.

Role of Researcher

Patton (2002) discusses that the qualitative investigator is the major instrument of data collection and analysis. There are two measures for investigation credibility that Shenton (2004) suggests: (1) “the development of an early familiarity with the culture of participating organizations” (p. 65) and (2) “background, qualifications, and experience of the investigator” (p. 68). Both of these measures will be discussed along with any known vulnerabilities. Potential bias is also examined.

Familiarity with the culture of participating organizations. Shenton (2004) discusses the importance of having familiarity with the culture of the participating organization. Knowing the culture of the participating organization helps establish trustworthiness because it enhances the credibility by enabling the researcher to open dialogue with participants and develop a rapport with the organization. I have been familiar with the virtual school I am studying for six years. The virtual school is under the umbrella of a larger alternative school program at which I currently work. There are five “sites” of this alternative school including the virtual school. The school has an overall principal, but each site, including the virtual school, also has an assistant

principal, who is in charge of the site's day-to-day operations including any issues with students or faculty.

Other familiarity comes from previously knowing those who participated in this research. I was able to gain trust as a researcher quickly because I have had a professional relationship with most of the participants in one way or another for several years. This professional relationship includes working with many of the participants either at past sites, or planning, and serving on the school planning committee. I also previously worked with both the counselor and the assistant principal on numerous occasions, which means I had an existing relationship with the gatekeepers of this case that expedited my gaining access. I was able to spend less time gaining trust with the participants, because trust was already established through previous professional encounters.

Background, experience, and qualifications of the investigator. Shenton (2004) discusses Patton's (1990) view that credibility must be established by the qualitative researcher because they are the main instrument for data collection. I have long been interested in helping students who are at risk for dropping out. As a researcher, it is important for me to start my research with something about which I feel passionate. I currently work at a drop out prevention alternative school in a large urban district.

One way we help students graduate from high school at the brick and mortar sites is by allowing them to combine independent book work where students use a workbook and a book to complete their course, with working on a course via the virtual environment. Last school year, I worked in the computer lab almost exclusively with students needing help with their virtual classes. This experience working with students enrolled in hybrid learning formats peaked my

interest in learning more about how a virtual environment could help our at risk students who may only do their schooling virtually.

My understanding of the virtual classes was of benefit to my research as well. When I first began at the school where I currently teach, I began not as a teacher, but as an assistant in the computer lab. This was my first understanding of not only the courses that were offered, but how the courses worked, and who the teachers were that taught these courses. I helped students with the local technology and hardware issues but also with the subject matter. I was able through this position to see what information was included in the virtual classes in almost every subject. These experiences helped me because I did not need to learn how the courses worked and I could begin research right away after gaining participants.

Bias. Potential bias was present in two areas: working with the virtual school teachers on many joint projects and sitting on the school planning committee with people from the virtual school. There were ways in which I made sure to minimize potential bias. First, though I had previously worked with some teachers in different capacities, I made sure the teachers I asked to participate were teachers I had not formally collaborated with, or shared students with. For example, over my tenure as a teacher at the school, I have worked with many of the English teachers. I made sure I asked the English Teacher I had the least amount of contact with to participate. This was easier to do with the other teacher participants because I have had very little interaction with the teachers of other subjects. Second, my work on the school planning committee contains less bias because my role focuses on face-to-face students and settings. The smallest risk of bias was present in the shared mission/vision statement which I looked at as part of my document examination.

Case Selection

In order to discover what a virtual school is doing to help mobile students, a specific case in a specific context was selected. I chose a virtual school located in an urban school district in the Midwest. This school fit my question because it is a virtual school that has many different at risk students, including mobile students. In order to fully investigate the phenomenon, it was important to bind the subject of the study (Yin, 2014) in such a way that most aspects of the school could be studied. In order to get a full picture of what the school was doing to help students graduate from high school, I chose participants that represented as many school subjects and roles within the school as possible.

Case Profile

In this case study, I looked at a virtual school as a whole and how support systems are helping mobile students. While the case is consisted of this one school, data was collected using both teacher participants, and administrator and counselor participants. All of the participants and all data collected helped form a picture of what the virtual school as an institution is doing to help students graduate. The virtual school is described in detail in Chapter 4.

The student body of the virtual school is made up of several different “types” of students: homeschool and virtual only students. Homeschool students are those in states all across the United States who are schooled at home and need to complete state required coursework to earn a high school diploma. There are many different reasons students choose to complete their high school education virtually. Regardless of the reasons, the virtual only students do the virtual courses at their own pace, and on their own time.

The virtual school faculty members have an average of over 17 years experience and all subjects are offered that would be found in a brick and mortar school in the state. There were eight participants in this study. Six teachers participated along with an assistant principal and a counselor for the virtual school. The selection of these participants was intentional. A sample that reflected the school as a whole was needed, and these specific teachers were chosen to avoid bias because I had not worked with them in the past. Administrator and Counselor were intentionally chosen as participants to insure different perspectives were understood and in order to capture the reality of the virtual school. Table 1 is a review of participants.

Table 3.1 *Participant Review*

| <i>Participant</i> | Years Teaching | Years Virtual Teaching | Subjects | Description |
|--|-----------------------|-------------------------------|--|--|
| <i>English Teacher</i> | 15 | 4 | Freshman English Senior English Dual Credit English | He was enthusiastic during interviews and provided clear answers. He clarified when I member checked. |
| <i>Math Teacher</i> | 24 | 2 | Algebra II Geometry | She has half workload for curriculum writing and half for teaching. |
| <i>Spanish Teacher</i> | 10 | 2 | Spanish I Spanish II Spanish III Spanish IV | She was very comfortable talking to me during the observation and interviews. |
| <i>Science Teacher</i> | 15 | 5 | Biology Physics | She has a very quiet demeanor but gave thoughtful answers to the interview questions. |
| <i>Business/Computer Teacher (B/C)</i> | 20 | 4 | Business Courses Computer Applications | She teaches electives but is well qualified according to state standards. |
| <i>Arts and Humanities Teacher (A&H)</i> | 20+ | 15 | Dual credit Arts and Humanities Two elective Literature Courses | He is the computer science coordinator and fixes computers for the virtual school. He has a calm demeanor and his answers were thorough. |
| <i>Administrator</i> | 26 | 12 | Assistant Principal in charge of operations at the virtual school | He acted as a gatekeeper for data collection and participant introduction. |
| <i>Counselor</i> | 12 | 3 | Counselor at the virtual school | She is the counselor at the virtual school and is in charge of the students who are enrolled only in the virtual school. She has an easy going nature. |

Access to Participants

Participants were chosen based on the subject they teach and their status as full time virtual teachers. Access to the virtual school itself was gained through a current professional relationship with the members of the faculty and the administration of the virtual school. The virtual school is part of the overall alternative high school in which I currently work. I had previous knowledge of potential participants. I also had access to the contact information and was able to speak to possible participants informally about their interest in the study.

During the first initial contact that was made with the potential participants, a copy of the informed consent was sent to them along with the invitation to participate. Once the participant expressed interest, a follow up meeting was scheduled to discuss the study in detail and obtain informed consent. The participants then signed the informed consent after any questions they had were answered.

Participants

Teacher participants were purposely chosen as a representation of the school as a whole. I included six teacher participants, an administrator participant, and a counselor participant. Of the teacher participants, three were male and five were female.

English Teacher. English Teacher has been teaching for fifteen years. He has been teaching full time at the virtual school for four of those years, and has a total of seven years at the virtual school. English Teacher teaches both semesters of Freshman English and both semesters of Senior English. He also teaches the dual credit Senior English course in which students are able to receive credit for both high school and college. Because of this, this English Teacher has to meet the qualifications of the local community college as well.

English Teacher was very enthusiastic during interviews and commented several times that he thought he talked too much and did not articulate his thoughts clearly. As the researcher, I did not find this to be the case. During both interviews, he provided clear answers and was willing to clarify his answers when I went back to do member checks.

Math Teacher. Math Teacher has twenty-four years teaching experience. Four of those years were spent at the alternative school associated with the virtual school, and she has been teaching at the virtual school exclusively for two years. Along with teaching, Math Teacher also develops curriculum and only teaches three classes. This is in contrast to the other participants, who have five classes, and who do not function as curriculum leaders like Math Teacher. She most recently has developed the latest Algebra II course. She also teaches both semesters of Algebra II and both semesters of Geometry.

Math Teacher was also added as a participant later in the data collection process, again in order to obtain broader course representation. While all teacher participants write their own courses, Math Teacher was involved in finishing up a new course and piloting the course at different schools in the district. During face-to-face interviewing, Math Teacher seemed in a hurry to get back to course development. Math Teacher still supplied valuable information, but was distracted by deadlines.

Spanish Teacher. Spanish Teacher has ten years teaching experience and has been with the virtual school for two years. Before becoming a teacher and, she worked for the state helping migrant farmers and their children navigate the education field. She is currently also a consultant for the United States on matters of migrant families. She teaches all Spanish courses offered at the virtual school.

Spanish Teacher felt most comfortable talking to me and walking through what she was doing during her observation. Spanish Teacher was enthusiastic with her interview answers, and she was also the only participant who I did not need to conduct member checking with. She is also the only virtual school teacher who does not have colleagues in the building. She consults with district teachers outside the virtual school since she is the only Spanish Teacher.

Science Teacher. Science Teacher has fifteen years experience and has been at the virtual school for five years. She teaches both semesters of Biology and Freshman Integrated Science.

Science Teacher has a very quiet demeanor but was engaged when interviewed and gave thoughtful answers before she spoke. Science Teacher was observed second and sits across from Spanish Teacher. They share some students and collaborate on ways they can help them succeed. Science Teacher sometimes needs help in technology and Spanish Teacher obliges her, especially when creating her new courses. Science Teacher was very willing to participate in this study and provided a wealth of data. She provided thoughtful answers during the interviews and when follow up questions were sent to her via email, she was quick to respond and gave detailed answers.

Business and Computer Teacher. Business and Computer Teacher has been teaching for twenty years and has been with the virtual school for four of those years. She teaches business courses, including business math, and she also teaches the required computer applications courses. At least one semester of the computer applications course is required for students to graduate. She teaches many students who need electives but want to take other electives at school, so they take business or another one of her courses outside of the normal school hours.

Arts and Humanities. Arts and Humanities Teacher has been teaching for over twenty years in the public school system. He was one of the first teachers hired to teach at the virtual school. He currently teaches dual credit Arts and Humanities and high school Arts and Humanities. He is a certified English Teacher and teaches two elective English courses. He is also in charge of hardware and software issues at the virtual school, and at the four sites of the alternative school. It is for this reason, his office is in a supply room. While it separates him from the rest of his colleagues, it does give him the space he needs in order to fix computers.

Arts and Humanities Teacher has a calm demeanor and was very engaging during the observation process. He explained to me what things were in his office and what his duties were. He also gave me access to student responses to course evaluations, which enabled me to get a student perspective. Without prompting, he also discussed the move to the new platform that was taking place at the time, and how it had changed the way he did some things.

Administrator. Administrator is the assistant principal at the virtual school, and he is in charge of all matters pertaining to the virtual school. His primary duties consist of day-to-day operations of the virtual school, and also promoting the virtual school. He has been in education for over twenty years, with the last eight at the virtual school.

Administrator acted as a gatekeeper for data collection and participant introductions. Even though I had worked with many of the participants before, there were still some that I had not yet worked with. There were two times in particular, when I felt I needed to add participants, which he provided suggestions. He was very helpful when gathering the documents for me, and made suggestions of what documents for me to search for on my own, and where I may be able to find them.

Counselor. Counselor has been in education for over fifteen years. She is currently the virtual school counselor and is in charge of the virtual only student orientations. She also coordinates the advisor/advisee program, and is the one who helps the virtual school teachers check student progress. Counselor has an easy going nature and one can tell she loves working with the students and staff at the virtual school. She answered all questions with great detail, and she was ready with answers to follow up questions as well.

Data Collection

Yin (2014) calls for multiple data sources. Yin (2014) discusses the importance of triangulation and suggests there should be at the very least three forms of data collection and that all data collection should be “aimed at corroborating the same finding” (p. 120-121). Data for this case study was collected in three forms: document examination in three forms, interviews with participants, and direct observation of participants. Member checking was employed after the first round of interviews and used throughout analysis to substantiate findings including member checking after the first round of interviews, and direct observations of participants.

Data collection began in September of 2015 and ended in September of 2016. There were a total of thirty-one hours spent collecting data. The data was collected in three forms: observations, interviews, and document investigation. Spanish Teacher, Science Teacher, Arts and Humanities Teacher, and Business/ Computer Teacher were observed, as were a school planning meeting and a virtual student orientation. The meetings were an accurate reflection of how the virtual school operates, There were two rounds of interviews with all eight participants. Documents were investigated first, then observations were conducted, followed by the first round of interviews. After the first round of interviews, a second round of interviews was completed. In total, there were eight hours of observations, seventeen hours of interviews, and a total of six

hours of document collection and examination. Table two provides an overview of data collection.

Yin (2009) and others discuss direct observations as being a standard in qualitative research (Creswell, 2007; Maxwell, 2012). Documents were collected with permission and help from the administrator and counselor of the virtual school. Document examination allowed me to get a broad view of the school as a whole. I observed the teachers directly as they carried out their day to day work. I looked for ways the teacher participants communicated with their students on a day to day basis. I also observed a virtual school orientation. Finally, I was a participant observer in a school wide planning meeting where there were ideas about how to improve the virtual school. Interviews were done in two rounds with each participant. The second round of interviews were used to member check on prior data collected, and to collect more data about emerging data. In the interviews, I was able to ask direct questions about the communication styles I previously observed.

Table 3.2 Data Collection

| | | |
|----------------------|---|---------|
| Document Collection | Mission/vision statement 30, 60 80 day checkup sheets Advisor/advisee lists Completed course evaluations Course Information Forms | 6 hours |
| Observations | Day to day operations of participants Virtual school orientation school wide planning committee | 7 hours |
| Interview 1 | Interviews based off triangulation documents and observations | 8 hours |
| Informal observation | Observed work stations | 1 hour |
| Interview 2 | Electronic participant responses Face-to-face interview responses | 9 hours |

Document Investigation. Data collected from documents included the mission and vision statement from the school as a whole, student checkups by teachers at the 30, 60, and 80 day mark to make sure students are on track, and the advisor/advisee lists of each of the participants. Finally, the student course evaluation results were investigated to bring student voice to the collection of data. Lists of students and previous schools attended was used in order to discover what percentage of students at the school were mobile.

The mission and vision statement of any school details what is valuable to that school. In the case of the virtual school I studied, they use the same mission and vision statement as the

alternative school of which they are a part. I wanted to examine the belief system of the school in order to get a better understanding of why certain policies and procedures were put in place. Since the 30, 60, 80 day checks provided insight into how teachers help students progress in courses; I wanted to examine how the teachers communicate student progress to the school counselor. The advisor/advisee list was used so I could better understand policies and practices designed to support students. Document investigation took place at the virtual school offices in a conference room so if there were any questions, I could ask a participant.

Observations. A great deal of time was spent observing participants not only individually, but them working in their rooms with others both in and out of their subject area. I told each of the participants I observed that I would be observing how they carry out the day-to-day operations as a teacher at a virtual school. I noted information given to me by the participant as I was observing them, but did not participate in what they were doing. I was able to observe an hour long orientation in the field. This gave students who were beginning their virtual only schooling and their families an opportunity to gain information about the school and expectations. I was a participant observer during a school wide planning committee meeting. At the time of the observation, I was the only non-virtual school representative present. During this meeting, data was collected on what was presently happening in the virtual school, and ideas for how to improve the virtual school.

Observations were also used to triangulate data with the document examination and interviews. I also wanted to use observations to help form questions for the interviews. All observations took place at the virtual school offices. The observations were conducted at the participating teacher's desk so I could see what they were doing as they worked. Field notes were taken during observations then typed up to facilitate early coding.

Interviews. I used information gathered from document examination and observations as data collection. I used the second round of interviews with the participants to conduct member checking and to delve deeper into the emergent themes. I used two rounds of interviews to ensure I was getting as much information about the school itself as possible. The first interview was used to become more familiar with the participants and the second interview was used to investigate early findings more closely.

Each of the eight participants were interviewed two times. Though because of time constraints on the part of the participant, two of the second interviews had to be done via email. If I was unclear about an answer they provided on the email interview, I followed up with the participant to make sure I was understanding the answer the way they intended. Member checking took place both in person at the physical location, and via email.

Interviews were conducted at both the virtual school site and at one of the alternative school sites. The Spanish Teacher interview was conducted at her desk while most of the other virtual school teachers were out of the room. I decided after conducting the interview at the participant's desk that I wanted to conduct future interviews in a more private environment so other teachers would not be distracted, and so the other participants that are in the work environment do not know the questions I will be asking. Some participants were interviewed in a teacher break room at the virtual school site. This enabled me to gain privacy for the interview, while being close to their work stations. With the English Teacher, both interviews took place at the virtual school's physical location.

Spanish Teacher, Math Teacher, and Arts and Humanities Teacher, and Business and Computer Teacher were all interviewed for the second round of interviews via email, with follow up questions and member checking questions also taking place via email. The Business and

Computer Teacher requested the second interview via email because she was concerned about how she “sounded” during the first tape recorded interview and stopped the recording several times to form her response to the question. The Counselor interview took place in her office since she wanted to be able to refer to specific students during her interview. The follow-up interview took place in her office as well, but at a different site. The Administrator interview took place at an alternative school site at the request of the Administrator. He needed to be at the site and requested we do the interview there. All interviews were tape recorded and transcribed shortly after the interview was complete.

Methods of Data Analysis

Overview of analysis. Throughout each stage I focused on interpreting the data through a comparative process of coding and categorizing. From the categories, themes emerged. I also looked across sources and types of data (Yin, 2014; Maxwell, 2012). Each stage is described below. In the second and third stage, all of my categories and codes were evaluated by an expert faculty member who confirmed my process and my findings.

First Stage. The first stage of data analysis took place in the field as data was being collected. This first stage also included transcribing the interviews I conducted, and repeatedly listening to them. This stage included member checking after observations and initial interviews as well. During this first stage of data analysis, I looked for emerging data and used that data to inform my second round of interview questions. I used reflective memos and field notes in order to change questions I was asking the participants, and begin the analysis stage. This first stage resulted in shifting the focus of my study to more specific means of determining how the school was helping mobile students. I also began to ask the teachers what they felt they were missing

technology wise, because I wanted to have a clearer picture of what the school offered the students and staff.

Second Stage. The second stage involved intensive data analysis. After all interviews were transcribed and observation notes were examined and typed on to the computer, I read the transcriptions of the interviews over and over. I read through each transcription closely at least six times each. I began highlighting common categories that were emerging as I was continuously reading the transcriptions of the interviews and field note observations. I then went back and made notes in the margins of the highlighted transcripts. These included notes on what information I thought may be emerging in the data. There were initially six categories that emerged from this process.

I created a visual which included the emergent categories from the interview transcripts. I read the transcripts again and placed direct quotes from participants in the category in which the quote fit best. This stage also included looking for disconfirming evidence. I did this by comparing observations and interviews for each participant to make sure what the participants said in their interview matched up to what I had observed. Using the categories and my field notes, I looked for themes. Looking for themes included combining categories and looking again at interview transcripts in order to make sure I had not missed important information. After combining categories, four themes emerged.

Final Stage. During the final stage, I tested each theme through memoing and using an intentional search for disconfirming data. This was accomplished by going back to the data several times and grouping, then regrouping the data until a theme emerged. Once a theme seemed to emerge, I color coded evidence within that theme in order to group the evidence.

After establishing each theme, I cut my individual transcripts and field notes apart. I then put them in categories to make sure there was no evidence I misplaced in the themes.

Trustworthiness

Throughout this study, I maintained a level of trustworthiness by using a range of methods. Shenton (2004) writes a summary of trustworthiness in qualitative research and discusses four constructs: credibility, confirmability, dependability, and transferability (pg. 64). The construct of credibility reflects how the phenomenon are reported and its relation to reality. Confirmability reflects the need of the researcher to eliminate bias. Dependability establishes the need for the study to be able to be replicated using a similar study. Transferability reflects the ability for the research to be applied to apply to cases outside the researchers participants. Table three provides an overview of the processes I used to establish credibility, confirmability, dependability, and transferability.

TABLE 3.3 TRUSTWORTHINESS

| METHODS AND CONSIDERATIONS | Credibility | Confirmability | Dependability | Transferability |
|---|-------------|----------------|---------------|-----------------|
| THE USE OF METHODS SUPPORTED BY YIN (2014) | X | X | | |
| I HAVE WORKED IN A DROP OUT PREVENTION PROGRAM ASSOCIATED WITH THE CASE FOR MANY YEARS AND I AM AWARE OF THE CULTURE OF THE SCHOOL. | X | X | | |
| TRIANGULATION OF CASES AND DATA SOURCES | X | X | | |
| ENSURED PARTICIPANT HONESTY | X | X | | |
| THE USE OF PURPOSEFUL SAMPLING | X | | | |
| THE USE OF A STRATEGIC METHODOLOGICAL DESIGN | X | X | | X |
| FREQUENT COMMUNICATION WITH MY ADVISOR, INCLUDING EMAILS, PHONE CALLS, AND MEETINGS. | X | | | |
| REFLECTIVE MEMOS AND JOURNALING WERE USED TO CAPTURE MY THINKING DURING DATA COLLECTION. | X | X | X | |
| MEMBER CHECKS WERE USED BETWEEN THE FIRST AND SECOND INTERVIEWS. | X | | | |
| RICH DESCRIPTION IS USED FOR THE CASE AND THE PARTICIPANTS. | X | | X | X |
| IMPLICATIONS AND LIMITATIONS WERE REVIEWED. | | | X | |
| USED PREVIOUS LITERATURE TO TRY AND UNDERSTAND THE FINDINGS. | | | X | |

Credibility. Throughout this study, I have used Yin's (2014) suggested methodologies in choosing my case study and participants. I made sure I used more than one source for data collection. These sources included document investigation, observations, and interviews. I also purposefully selected my study participants in order to get a balanced view of the school as a whole. I used member checking after the first interview in order to make sure I was understanding participant responses and to make sure the participants were providing me honest answers to my questions. The use of reflective memos, either audio or journals enabled me to make sure I had a running commentary of things happening in the field. Regular meetings with my advisor provided feedback and offered suggestions on what can be changed in order to accurately capture the case with fidelity.

Confirmability. By reaching out to my dissertation chair, who is also a qualitative researcher and relying on Yin's (2014) methodologies, I was able to ensure I used methods that have been proven effective in case study research. Triangulation of data was used in order to understand my bias and remove it. Continuously checking for honesty and disconfirming information also helped promote confirmability. I checked for honesty during interviews by asking questions in different ways in order to see if I got the same response each time. I also looked at my field notes, observations, and both sets of interviews in order to see if there was any disconfirming evidence present.

Dependability. Shenton (2003) discusses that "overlapping methods" (pg. 71) can be used in order to help future researchers repeat the work. Shenton's (2003) main focus when it comes to dependability is that there is in-depth coverage so the reader can understand to what extent proper practices have been followed. I used field notes, memos, and thick description of

the case and participants in order to ensure the study can be replicated in comparable cases.

Thick description can help future researchers duplicate the study.

Transferability. Transferability can be compared to external validity in quantitative research (Shenton, 2003). Firestone (1993) presents the argument that it is the investigator's responsibility to ensure sufficient information in context about the sites and participants is provided. Providing thick description of the case and participants provided a clearer understanding of the possibility of transferring the findings. Understanding the findings of this study enables future researchers to study similar cases.

I have identified two areas that pose a threat to trustworthiness: lack of student voice, and researcher bias. Student voice was originally a part of the study design, but because of the transient nature of many virtual school students, student participants were difficult to find. In order to bring in student voice to some degree, I examined student responses to course evaluations. Students shared what they liked best about the courses. In order to lessen the threat of researcher bias, I looked for disconfirming data and used triangulation to do so. I also used reflective memos and field notes to ensure honesty in myself and how I collected and analyzed my data. Part of lessening researcher bias was to conduct member checks in order to confirm with the study participants that my interpretation of their responses were reality. I conducted member checks to confirm my assumptions along the way.

Conclusion

This study is designed to investigate how a school is helping highly mobile students. This chapter discussed the methods of research that were used to collect and analyze data using a case study design. Shenton's (2004) review of trustworthiness was used, and a researcher as

instrument statement was given. Threats to trustworthiness and bias were discussed as well in this chapter.

Chapter 4 – Findings

Student mobility is a predictive factor in students dropping out of high school (Rumberger, 2003). This research used Institutional Theory (Rumberger, 2001) and Academic Mediation Theory (Vygotsky, 1978; Bachman, Green, & Wirtanen, 1971; Ekstrom, Goertzt, Pollack & Rock, 1986) to explore the phenomenon of mobile students enrolled in a virtual high school. The goal of this research is to deepen the knowledge about how virtual schools may serve mobile students. This research attempts to answer two questions:

1. In what ways is mobility represented in a virtual school in an urban school district located in the Midwest?
2. How does this virtual school meet the needs of mobile students?

Case Profile

The virtual school, started in 2000, is in a large urban district in the south. The school is a part of a larger, district -wide drop out prevention program. This program enables students at risk for dropping out to enroll in face-to-face and virtual courses at the middle and high school levels. Students enrolled at the virtual school take only online courses and are enrolled in two online courses at a time. The courses typically expire in sixty days. The subjects offered are: English, math, science, social studies, arts and humanities, world languages, and electives such as business. The faculty, all of which only teach virtual classes, has an average of 28.7 years of teaching experience and have to meet the same qualifications as a teacher in any school.

All instruction at the virtual school is done online and students only interact and communicate with the teacher. The school is individualized and has an open entry/ open exit format, which means students may begin and end their virtual schooling at any time, regardless of the time of year. This idea of open entry/open exit was created when the school was being formed in order to meet the needs of as many students as possible, especially mobile and older students. Before students are enrolled in virtual courses, they must attend an orientation. Students complete courses at their own pace with the help of the virtual school teachers.

Students do not go to a common physical building to learn, but the virtual teachers do go to a common building to teach. The virtual teachers are expected to be present⁵ at the headquarters during normal school hours from 7:30-4pm. Most virtual teachers work year round, even during the summer, but take the same holidays off as a face-to-face mainstream school teacher. With the exception of Arts and Humanities Teacher, and Math Teacher, all participant teachers were housed^d in the same large room. The room has eighteen cubicle desks for the teachers. All teachers of the same subject sit together in the room. The English teachers sit at the front of the room, nearest the door, and the science teachers sit at the back window. The Business and Computer Teacher sits near the science teachers at the back of the room with the social studies teachers. This common space enables the teachers to collaborate. Both of the teachers not housed in the large room have other duties such as curriculum writing that make it necessary to have their own office. Arts and Humanities Teacher not only writes curriculum, he is also in charge of the computer repair for the school. His office is large enough to store the computers he is working on, and is across the hall from the big room the other teachers are in. Math Teacher has an office a little further away from the big room, but it is a short walk. In her office are the other two math teachers with whom she collaborates and writes curriculum.

Teachers spend their days collaborating, updating courses, creating lessons, administering quizzes, and engaging in the work of fostering student learning. Because the interactions and communications are always between one student and each teacher, ~~The~~ teachers are expected to return communication within twenty four hours, and grade assignments within forty eight hours.

Findings

Data analysis yielded four findings. The first finding addresses the first research questions seeking the percentage of mobile students enrolled in the virtual high school. The other three findings address the second question seeking an understanding about how the virtual school meets the needs of mobile students. Finding two describes the asynchronous nature of the school. Finding three presents challenges faced from working in a virtual environment. Finding four illustrates how teachers and students create connections without face-to-face learning. These three findings work together to discuss the needs that are present in the virtual school, the challenges as well as how the school counteracts those challenges, and how teacher and students stay connected. Each finding is presented below.

TABLE 4.1 Synopsis of Findings

| Research Question | Finding | Representative Quote |
|--|--|--|
| In what ways is mobility represented in a virtual school in an urban school district in the Midwest? | 100% of students at the virtual school are mobile | <i>Forty percent of students in virtual school have attended at least two high schools. Sixty percent of students have attended three or more high schools with nine percent attending five or more high schools.</i> |
| How does this virtual school help mobile students? | The nature of instructional time at the virtual school enables teachers and students to work outside normal strictures of mainstream schools. | <i>Arts and Humanities Teacher mentioned how the virtual course ...goes with the student into any location or situation (Interview, December 12, 2015).</i> <i>Students can work on the courses anywhere there is an internet connection, and I think the availability of the courses 24 hours, 7 days a week, and 365 days a year is a huge benefit to students –Math Teacher (Interview, December 12, 2015).</i> |
| | The virtual school and its teachers counteract communication challenges posed by the nature of virtual learning. | <i>I like the idea that our teachers not only work in the virtual environment but also have the ability to go out and get face-to-face feedback. –Administrator (Interview, October 5, 2015)</i> <i>On Thursdays we do our Thursday tutorials, and when someone has an interesting product they want to share with the group, everyone is invited. –Administrator (Interview, October 5, 2015)</i> |
| | The virtual school has policies and procedures in place to give students and teachers an opportunity to build a relationship to help students. | <i>It (the information form) really helps, I would say just personality and interests and I am finding I like to give more student choice in work. I am finding as I get to know the varying interests that are out there from the kids, I can create varying assignments and it can give me a better feel for what types of assignments I could create. –Spanish Teacher (Interview, October 5, 2015)</i> <i>This (the progress check emails) provides the names that I can check on for people that have not been working as much as they should. –Science Teacher (Interview, November 6, 2015)</i> <i>Advisor/advisee is really, the intent was to tie a teacher in with a group of students as they try to get through content, almost a liaison. That advisor acts as an advocate...-Administrator (October 5, 2016)</i> |

Finding 1: One hundred percent of virtual only students are mobile.

Forty percent of students in virtual school have attended at least two high schools. The remaining sixty percent of students have attended three or more high schools with nine percent attending five or more high schools. One student out of the 256 total students attended eight schools. This student had been to high schools in three different counties, homeschool, a school for pregnant teens, two different schools in the same school district, and the virtual school.

Figure 1 shows what percentage of students attended more than one school during their high school career. Some of these schools include a teen parent support school, a facility for incarcerated youth, and several different styles of alternative schools including behavior oriented alternative schools. Virtual students may also have been homeschooled or reside in another state.

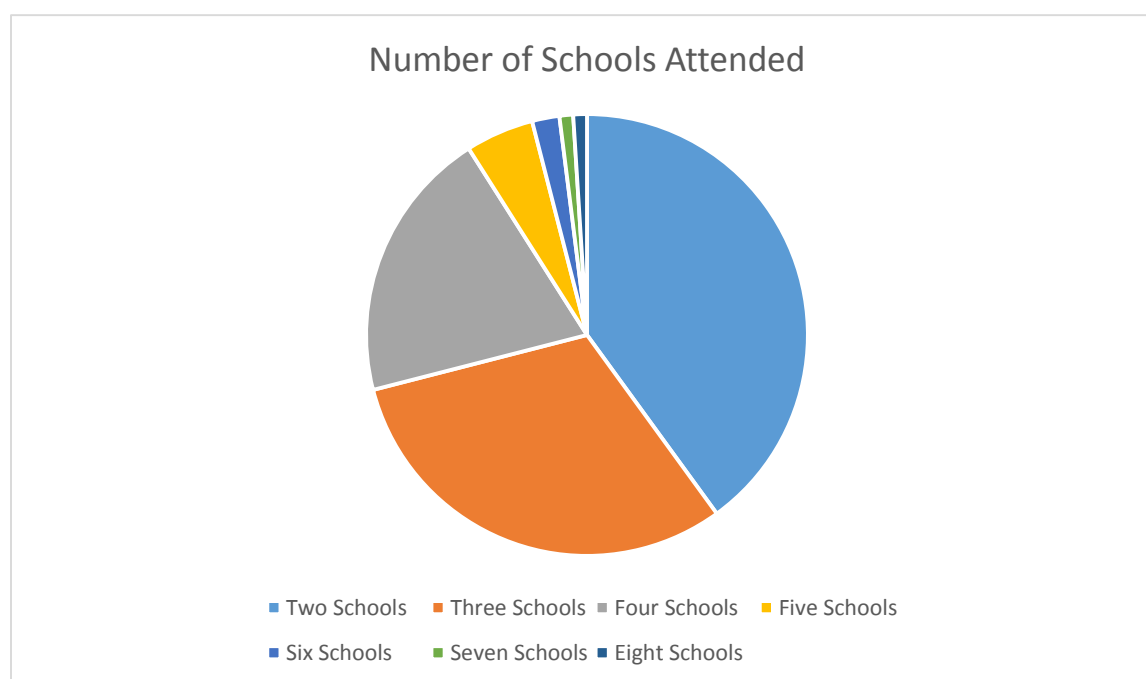


Figure1 –breakdown of how mobility among students

The degree of mobility reflects the diverse range of experiences and needs of virtual students. Counselor discussed the most common “type” of virtual student:

There are almost as many types of students as there are students. We have many students who choose to do the virtual school because they have children they have to take care of. Some of our students are taking virtual classes because they are the primary breadwinners for their families. With others, they had problems at school academically or socially. Still others are attending the virtual school since the drop out age went to 18, from 16. This is a way for some students to attend school only on paper so they are not considered truant (Interview, October 5, 2016).

Counselor understands the types of students who attend the school virtually. Many of the participant teachers also understand why their student may benefit from the services of the virtual school, and may need to work in an asynchronous environment. These mobile students have needs that preclude their regular attendance in mainstream face-to-face high schools. Their needs, be needs driven by family or financial responsibilities or social-emotional requirements, call for a flexible and responsive educational system.

Finding 2: The nature of instructional time at the virtual school enables teachers and students to work outside normal strictures of mainstream schools.

The asynchronous nature of the virtual school studied provides unlimited access to curriculum without the restrictions placed on students and teachers that are found at mainstream schools. Continuous access to curriculum by both the students and the teachers helps the virtual school ensure that everyone has the opportunity to work on high school classes. This is especially helpful for those students who are unable to work within the hours of the mainstream

school day. While there are many possible reasons for students being unable to work during traditional school hours, all six teacher participants mentioned students holding jobs and students having children. Students being able to work in their own time and at their own pace is beneficial to supporting them. For example, classes are available 24 hours a day, which means if a student has responsibilities during traditional school times, they are still able to work on required course work. Mainstream schools in the studied district require six hour days. In the virtual school, students are able to work in a way that meets the particular demands of their daily life.

English Teacher discussed some of the roadblocks to success that may be present in the lives of the virtual students and why they may need an option like virtual school, "...it is difficult since so many of our virtual students work many hours and have small kids to take care of, and school is not their first priority" (Interview, November 5, 2015). English Teacher understood that virtual school students may have a range of demands on their time which lead them to work on school assignments outside the mainstream school day. Spanish Teacher discussed the pacing benefits during an interview, "Online is very beneficial because you are working at your own pace" (Interview, November 5, 2015). Spanish Teacher was aware that students working at their own pace were more likely able to graduate regardless of roadblocks that may be present. There was a clear understanding among all participants that the virtual school program was designed to help students who, for whatever reason, could not succeed at the mainstream school.

Three of the teachers and the administrator talked specifically about the benefit of asynchronous instruction time for the student. Arts and Humanities Teacher mentioned how the virtual course, "...goes with the student into any location or situation. Students in jail and students without a real home still get the same responses and perfect lessons from the teachers as

the students sitting at a site or in a regular classroom” (Interview, December 12, 2015). Math Teacher discussed something similar during her interview, “students can work on the courses anywhere there is an internet connection, and I think the availability of the courses 24 hours, 7 days a week, and 365 days a year is a huge benefit to students” (Interview, December 12, 2015). Administrator discussed the value of virtual school for the student because of the ease of access:

The beauty of the virtual presence is that course is active, it doesn’t matter if the building lights are on, if the building lights are off, if you are moving from one school to another, as long as you have that username and password, and access to the internet, that course can follow you anywhere (Interview, October 5, 2015).

Each participant noticed the ways in which the asynchronous nature of instructional time benefitted students. All participants showed an awareness of the importance of providing courses that could be accessed at any time.

The difference in instructional time calls for a different expectation for responding to students. Business and Computer Teacher discussed the requirements of virtual school teachers, “the consistent requirements, like you have to respond to all emails within 24 hours and all assignments graded within 48 hours” (Interview, November 5, 2015). These guidelines, in place since the school’s beginning, were put in place because of the asynchronous nature of the virtual school. MathTeacher also mentioned that this is one of the differences between where she used to teach and teaching virtually, “It is different in the fact that I am expected to check on my classes on nights, weekends, and holidays and in summer” (Interview, December 12, 2015). Like students, teachers work during as well as outside of traditional school hours. While discussing her previous teaching experiences, Business and Computer Teacher revealed, “I have worked for four years year round without having even a spring break off. Although I might be at

home, you still get on [the courses]. Even when we take a vacation, every night I was on for two hours” (Interview, December 12, 2015).

Spanish Teacher discussed how this access allowed for focused instructional time: “in some ways it is great because there is not all the distractions of the classroom going on. We are not getting interrupted by fire drills, there’s not pep rallies going on, there’s not kids being pulled out for testing” (November 15, 2015). . Each of the teacher participants and the administrator participant had similar thoughts about being required to work at different times than at most mainstream schools.

On a similar note, English Teacher discussed how the asynchronous nature of the virtual school created a pace that enabled individualized feedback and student support. This was something that Spanish Teacher also discussed in her interview, “Online, I can take my time and present the material in as many ways as I can think of for the many different learning styles of my students; I can teach what needs to be taught to ALL students, since no one gets left behind” (Interview, November 5, 2015). Because the virtual environment is also different for the teacher, Spanish Teacher goes on to say, “one of the things I like is if a kid is having trouble, I can sit down with them one on one at any point and help them, where in a regular classroom, they had to come after school” (Interview, November 5, 2015). Content and student teacher engagement quality is enhanced by the asynchronous and individual nature of virtual school instruction.

The Arts and Humanities Teacher feels as though these enhanced qualities lead to other opportunities he did not have at the mainstream school in which he used to work. He discussed the importance of this in his interview:

I hope the delivery of the content is always available, but beyond that, I think that my course might help them see beyond their immediate surroundings. I taught for five years at one of the lowest performing schools in the state, and something I learned there was that poverty exists at many levels. Mental poverty, the inability to see beyond immediate needs, is not a choice mobile students make; it is a way of life. Many of the lessons in my course have the hidden message purpose of showing students that there is another way of life, that there is beauty in the world that transcends their immediate troubles, and the Internet has made access to that world much easier (Interview, December 12, 2015).

Arts and Humanities Teacher has a clear understanding of the importance of providing quality courses to the students who may be handling challenges in their lives that create roadblocks to traditional education models. All the teachers mentioned how important it is to have courses available for those who are highly mobile.

The asynchronous nature of the virtual school benefits mobile students by allowing access to the courses at all hours of the day. Mobile students are able to work at all hours of the day and every day of the year, even when mainstream schools are on break. This asynchronous nature also enables students and teachers to pace learning based on individual needs. With this asynchronous nature and individualized instruction, teachers are required to keep different hours than mainstream school teachers, and who have different grading and communication requirements.

Finding 3: The virtual school and its teachers counteract communication challenges posed by the nature of virtual learning.

Unique challenges exist in the virtual school that do not always exist in the mainstream school. The virtual school has developed ways to counteract these challenges in order to help mobile students. The ways in which the virtual school teachers and administrator counteract the limitations of communication and communicative instruction vary depending on the nature of the challenge. At the virtual school, nearly all student and teacher communication is asynchronous through text based mediums like email. The virtual school counteracts the challenge of asynchronous text based communication in two ways: creating face-to-face interactions and leveraging technology.

Communication Challenges

Administrator discussed what he thinks is the biggest obstacle to communication:

The biggest barriers I see with our environment is that it is not IMs or instant messaging.

In an asynchronous environment, with a hundred and fifty students, that [instant communication] is a difficult thing to do because what we find is that our teachers check email at six o'clock in the morning and they are done by four or four thirty in the afternoon. Our students probably don't start until around seven or eight at night and work until four in the morning. I can't expect the teachers to be checking [all day].

Having a program where the student can do it at any time means there can't be an instantaneous response (Interview October 5, 2015).

Administrator's awareness of how teacher-student communication may stretch over hours instead of the immediate interactions enabled by instantaneous communication highlights the

complexities presented by asynchronous learning environments. Student schedules may be the opposite of typical work day teacher schedules. This potential opposition creates delayed teacher feedback which delays assisting students in their learning process.

In most mainstreams schools, the teacher is able to communicate with the student face-to-face, this is not the case in the virtual school. Spanish Teacher spoke of the difficulties communicating with her students, “I think the hardest thing is that I don’t see them face-to-face so any communication tends to be done via email” (Interview, November 6, 2015). Science Teacher also elaborated on the difficulty of communicating with virtual students, “It is because you can’t get tone from an email. It has been a big challenge missing that personal interaction with the kids” (Interview, October 5, 2015). Without face-to-face interaction, communication is void of visual and auditory cues that aid clarity and understanding. For Spanish Teacher and Science Teacher, this absence created a challenge that needed to be overcome. For Science Teacher, this meant increased attention to the wording of her emails, “By having to compose an email I feel like a lot of the times, the feedback I am giving them is more concise than when it is face-to-face” (Interview, November 6, 2015). Science Teacher realizes that the way in which she communicates has had to change because of the asynchronous nature of the program. Both teachers and Administrator identified a challenge unique to the nature of the virtual school’s instruction: asynchronous communication that lacks face-to-face interactions. English Teacher also discussed a challenge he sees in the ways he can communicate with his students, “I know that communicating on- line, even via email, journal entries, or by phone it is not the same as having an instructor there with you.” English Teacher has an understanding of the differences between how he used to communicate and how he has to communicate now.

For some of the teachers at the virtual school, communicating at a school in which there is very little face-to-face interaction is difficult. Math Teacher seemed to have difficulty adjusting to being a virtual teacher. In mainstream schools, she was able to help the student face-to-face. Sometimes this included working a problem out on paper. Because of the limits in technology at the virtual school, she was unable to do it in a similar way. Math Teacher felt empowered to find a solution, “In math, showing work is difficult using equation editor and trying to type out math. I often show work by writing on paper, taking a picture of it and sending it to the student” (Interview November 6, 2015). Spanish Teacher discussed the difficulty of conducting instruction the same way she did as a teacher at a mainstream school:

This is a traditional speaking assignment where they are speaking with me and I am asking them questions and they are answering in Spanish. I can’t do a daily assessment of even me greeting them as they are walking in the classroom, then they reply, this is a chance to do that assessment that if I ask them in Spanish can they answer appropriately (Interview, October 5, 2015).

Both Math Teacher and Spanish Teacher relied on face-to-face aspects of instruction. Math Teacher relied on face-to-face settings to model problem solving while Spanish Teacher relied on face-to-face settings to assess students’ speaking skills. The shift to asynchronous and digital communication pushed them to think differently about these aspects of their instructional practice.

Science Teacher described the challenge of teaching in an asynchronous program when she described the frustration she has when a student emails her in a panic because they need help on something and cannot call because it is late at night. She would quickly email the student back to see how she could help, and she would never hear back from the student. The time delay

involved in an asynchronous environment took an emotional toll on Science Teacher because it was difficult for her to connect with the students she was trying to help.

Counteracting Challenges

The virtual school has developed ways to counteract the challenge of asynchronous and text-based communication. The virtual school helps counteract the challenges in the following ways: (a) enabling teachers to help students face-to-face by either inviting the student to the school or meeting the student somewhere to help them and (b) developing teacher technology knowledge and practice.

Enables face-to-face meetings. Administrator also discussed how face-to-face meetings are sometimes the best way to meet the unique needs of the student. He felt that teachers in the virtual school needed to be willing and ready to move beyond the virtual setting:

The school actively promotes teachers in our program getting out to other schools (and places like libraries) and visit with their student. I like the idea that our teachers not only work in the virtual environment but also have the ability to go out and get face-to-face feedback. When you have three students who are all struggling on the same thing that should be a red flag to the teacher, I need to get out and see what the problem is (Interview October 5, 2015).

Administrator understands the importance of teachers going out to meet students face-to-face, especially if the student is struggling. It is this face-to-face meeting that Administrator believes will help the teachers improve their course and adapt their teaching style.

English Teacher shared why he feels it is important to have some face-to-face interactions:

I have found, when the students come here, I can really break a topic down and provide the needed support and clarification if I am able to see their reaction or the level of frustration on their face. It is difficult to communicate face-to-face in an online environment (Interview October 5, 2015).

English Teacher later shared how he felt supported by the administration to either invite the student to where the school is housed to help them, or to go out and meet them at a school or a public place in order to help them, “I have provided support at schools, and being able to go around the city and around town. They are very receptive for me specifically, and to go out and do what we need to do to help them be successful” (Interview, October 6, 2015). By meeting the student face-to-face, English Teacher is able to communicate in a more nuanced and clear manner than via email or the phone.

Math Teacher also mentioned how she feels supported by administration because she is allowed to tutor students face-to-face, after school. While there is a limitation in regard to online communication, all participant teachers mentioned they felt supported to seek out face-to-face interaction with virtual students.

Developing teacher technology knowledge. Developing teacher technology knowledge and practice enables the virtual school to counteract the technology challenge presented by the asynchronous environment. Administrator discusses his expectations for teachers in the virtual environment, and the importance of collaboration between the faculty:

I think knowing the technology is important, and a willingness to learn the technology is even more important. What we have discovered is that the products that we use can become very daunting to learn for everyone. On Thursdays we do our Thursday tutorials,

and when someone has an interesting product they want to share with the group, everyone is invited, that individual can share out what they have learned. The learning of the technology is very collaborative in the virtual school. I want a student centered teacher first, then I think we can give them the technology they need (Interview, October 5, 2015).

Administrator understands that one way to help the limitation of communication in a virtual environment is to have the teachers collaborate about technology to discover and share ways they can communicate effectively with highly mobile virtual students. By setting aside one day per week, in this case Thursdays, teachers are able to help one another with technology that may be beneficial for their students, thereby leveraging technology to help counteract the absence of a face-to-face environment.

Arts and Humanities Teacher helps counteract this challenge by differentiating his courses. He offers choices in what the students can produce to meet the requirements of the course and leverages technology to differentiate how students interact with the content. There are multiple ways a student can complete an assignment such as choosing between paintings, and choosing between a writing assignment and a project:

I have found that some students have to read the material, some have to hear it, and some have to see it moving around on the page as a video. So I wrote lessons on every single topic and developed quizzes to check for understanding for each topic. I have added more assessments and content, especially in the application of arts. My content, although available as physical book, is still delivered online, often in several formats to address differing learning styles (Interview, November 9, 2015).

Arts and Humanities Teacher's awareness about best practices in a virtual environment enables him to find ways to counteract the asynchronous nature of his class by helping him create different technology-based experiences for the different kinds of students he has. He also understands the need for students to be able to work alone and without face-to-face teacher support.

Spanish Teacher discussed a tool that was helping her better communicate with her students by piloting the messaging and video component in the latest virtual school platform:

It is basically the platform's audio and video communication system. I send the kids a link and they click on the link and it sends them to a chat room where the kids use it to do speaking assessments for Spanish class. They can do it from the comfort of their own home or school (Interview, October 5, 2015).

Spanish Teacher found a way to use technology to help her communicate with her students, and to help further her instruction. When in a mainstream school, she would greet her students in Spanish, and expect them to greet her back in Spanish. The virtual school empowered her to feel she could look for ways to help facilitate instruction and communication in her courses in spite of the asynchronous nature of the environment.

Likewise, Science Teacher discussed the importance of finding ways to incorporate technology in order to help students:

Just getting more familiar with using things like building diagrams with PowerPoint and putting the shapes together and all of that. That is what I feel I am learning the most. I really feel like I need to learn and get better at video type things. Making my own videos

and converting to whatever format they need to be. That's the next area I am going to do (October 5, 2015).

Science Teacher is always looking for ways she can help her students virtually by using software. She is also developing her understanding of technology to counteract the lack of face-to-face interaction found in a mainstream school. She wants her students to thrive in an asynchronous environment.

Arts and Humanities Teacher saw the need to provide meaningful feedback to students. He created a database, and uses both positive and negative reinforcements to student responses. He discussed this during the interview:

I have automatic feedback on multiple choice questions that not only tells them what they miss but WHY it is wrong, or sends positive reinforcement for correct answers, and I have a large database of feedback responses I use for short answer and essay questions. After fifteen years of teaching the same content online, I have seen most answers hundreds of times. I read a student's work and plug in the perfect well-crafted response in seconds. No teacher in the classroom could take the time to develop and deliver such precise feedback consistently. On those rare occasions when a student writes something so unusual that it requires a "new" response, I add that to the database for possible future use. I keep the database online so that no matter where I am, I always have access to it (Interview, November 6, 2015).

The virtual school provides students the opportunity to work in an asynchronous environment, thereby helping to counteract mobility issues the student may have. This asynchronous virtual approach, however, is not without challenges. The lack of face-to-face and

instantaneous communication creates challenges for instruction. To counteract these communication challenges, the virtual school teachers are encouraged to create face to face meetings when needed and the school works to continuously develop and leverage teacher technology knowledge and practice. Through these counteractions, the virtual school serves the needs of mobile students.

Finding 4: The virtual school has policies and procedures in place to give students and teachers an opportunity to build a relationship to help students.

The virtual school encourages relationship building between students and teachers by creating and utilizing information forms. There are also two programs in place that help keep students on track to complete courses and graduate: progress checks enable teachers to monitor student advancement in the course, the advisor/advisee program gives teachers an opportunity to advise students who are not in their classes. Each of these components gives the virtual school teachers the relationship building tools that help virtual students be more connected to the school.

Information Forms

The information forms are used by the teachers to gain contact information from the student. All participating teachers include the contact information form in the first unit. The teachers ask for the student information and in return, give the students their contact information. Appendix A displays a copy of this form. Three of the teachers use the form to gather additional information from the students, and take this information and use it to adjust lessons or develop relationships with the students.

Arts and Humanities Teacher discussed one way he uses the information form to get to know his students a little better:

I have a question at the very beginning of the course that asks the students to tell me something about themselves they want me to know. I have had a few interesting answers, like “I am from Puerto Rico” and “I am Muslim and I have never studied art,” but mostly I get answers like “I am taking this course because I hate being in a classroom wasting time” and “I just want to learn and test and get through this” (Interview, October 5, 2015).

By asking students to share something about themselves that they want their teacher to know, Arts and Humanities Teacher expresses interest in the students beyond their academic performance. Through this question he initiates a connection with the student that may fall outside of the content he teaches. A copy of the information form Arts and Humanities Teacher uses is in Appendix B.

Spanish Teacher and Arts and Humanities Teacher both ask more questions on the information forms than do the other teacher participants. Both teachers ask students questions about their free time and outside of school interests with the goal of being able to differentiate their online learning experiences more effectively. Spanish Teacher uses the student responses to differentiate her courses and engage her students in conversations in Spanish. Spanish Teacher commented:

It (the information form) really helps, I would say just personality and interests and I am finding I like to give more student choice in work. I am finding as I get to know the varying interests that are out there from the kids, I can create varying assignments and it

can give me a better feel for what types of assignments I could create. Maybe be something on an artist and you could write an essay or maybe create a painting of that famous artist for people who are more inclined to painting and for the people who are more into technology, they could maybe create a slideshow of their most popular works, you know, so it is all focusing on the same skill of getting to know a certain Spanish painter, but they are all different aspects of that (Interview, October 5, 2015).

Spanish Teacher differentiates instruction by content depending on what she has found out about the student through the information form. Appendix C is the information form by Spanish Teacher. Both of these teachers expand on the standard information form to create a connection with the students that they attempt to leverage into engaging learning opportunities.

Progress Check

The progress check program was started by the principal in charge of both the dropout prevention school and the virtual school. Progress checks consist of an automatic email sent to the course teacher every 30, 60, and 80 days that a student is in the course. The program is two years old and was started because students were not completing courses in a timely manner. He wanted to prevent students from falling through the cracks and felt this was one way students could be required to complete the course in an allotted amount of time. The courses are set up to be completed in sixty hours, but there is a 90 day expiration date to accommodate those students who encounter challenges often associated with mobility.

A student should be able to complete the course within ninety days. A student should be a third of the way through the course at 30 days, half way through the course at 60 days, and at 80 days, they should be almost finished. The teacher looks at the progress for after receiving each

of these email messages. If the student is not making satisfactory progress, the teacher contacts them to make sure they get back on track for timely course completion. All participant teachers call the students if they are falling behind in the course.

Science Teacher discussed how she uses the progress checks:

This (the progress check emails) provides the names that I can check on for people that have not been working as much as they should. It is easy to keep track of the students that are working and contacting you on a regular basis. This helps make a connection with those that are not as active in the course or have not been working as much. One of the positives is that there have been times when I reached a student who was having problems but did not know who to contact or what needed to be done. This also serves as a reminder that the student is running out of time in the course and it encourages them to keep working (Interview November 6, 2015).

Science Teacher uses the automatic email to create a routine connection in order to help students succeed, and recognizes the challenge of keeping up with where students are in a course.

Spanish Teacher discussed how students that are contacted seem appreciative someone has reached out to them and uses the progress check automatic emails to go beyond the screen and reach out to the students:

Well, it seems when we do call, they are genuinely happy to hear from the teachers. And I would say out of all the phone calls I make I probably reach about 25% of the kids, but the ones I do reach seem genuinely happy I am calling to check up on them and I tell them if you have any questions, let me know, I am here to help. Sometimes I talk to the parents, and they all seem happy that we are reaching out to talk to them and that we

aren't some robot behind a screen who is managing the courses (Interview, November 6, 2015).

Spanish Teacher values the progress check program because it facilitates a connection to students in her class. She uses the information to go beyond the screen and get to know her students better.

When Business and Computer Teacher checks student progress at the 30, 60, and 80 day checkpoints, she uses information from an assignment that asks students to create a resume. She discussed how it has been interesting to her to get to know her students through the assignments and informs her communication with them when checking progress. Business and Computer Teacher discussed her students and how she would not always know where they are in a course without the progress check:

I have had a race car driver, I have another student that, when they do their resumes and things like that, I have several who are in North Dakota, they will usually say things in their resumes that will give me hints (about their life), if that is the course they are taking. A lot of times I don't know anything about them. If they are an extremely bright student or they are a student that doesn't perform or hand stuff in, then I wouldn't realize they're not working. It has been neat (to get the opportunity to receive the progress check alerts) (Interview, October 5, 2015).

For Business and Computer Teacher, progress checks work in collaboration with information forms and class assignments to help her better understand her students. She also uses some of this information to help the students make good progress.

The virtual school relies on the automatic progress checks to empower the teachers to reach out to their students and try to help them make adequate progress. Both the Science and Spanish Teacher use the progress check program to go beyond the screen and form a connection with their students. Computer and Business Teacher uses the progress checks as another tool to help her students graduate high school in a timely manner.

Advisor/Advisee Program

Along with the progress checks, the virtual school has instituted policies and programs that enable the teacher to build a relationship with the student. Each virtual school Teacher receives a list of ten to twelve students who they are to contact and mentor. From the virtual school's perspective, the teachers are expected to contact their advisees at least one time per semester before parent-teacher conference, then when needed in between the conferences. Half of the teacher participants call the advisees on their list only before the parent-teacher conferences. Two of the teacher participants maximize the program by communicating with the students on their list more than the required amount. Science Teacher, Administrator, and Spanish Teacher all shared their experiences of the advisor/advisee program.

Administrator described what the advisor/advisee program is, and how he feels it has led to more course completions among virtual only students:

Advisor/advisee is really, the intent was to tie a teacher in with a group of students as they try to get through content, almost a liaison. That advisor acts as an advocate and goes to the math teacher and says, 'gosh, check on Sally Jones. She says she was trying to make contact with you'. So, it is kind of nice to have multiple individuals care about the student as they make their way through the program. So you have your student

progress, then you have your advisor/advisee. What I have found is that the teachers become a real advocate for that student and so much so that I was informed, when an advisor had this young lady who was a half credit shy of graduation and she fell off the face of the earth, the teacher said, 'I found her, I got her back now how can we help her?' She actually recaptured a potential graduate and she had just got lost (Interview, October 5, 2015).

Advisors act as a liaison and advocate for the student, and the program was designed to work in collaboration with the progress checks. Advisors can connect students to people and resources that can support them when they encounter challenges. By reaching out to other teachers in whose classes they are struggling. Advisors help bridge that communication. If needed, as Administrator indicates, advisors can also reach out to administrator and the counselor to support the student.

Spanish Teacher described how she uses the advisor/advisee list she receives to help her be an advocate or liaison for them:

It is supposed to be really about relationship building on both ends so we get to know kids who aren't in our courses, and then kids who aren't taking our courses to just get to know some teachers in our building like in general. The idea of being their advisor is if they have questions or need guidance, just need, just really need anything and they don't necessarily know who to call, I would be their person. So they know if all else fails, they can call me and I can either put them in touch with another person who can solve the problem for them, um, hopefully get something accomplished on their behalf. Then on the parent-teacher conference days, those are the days we invite the kids to come in and meet with their advisor (Interview, November 5, 2016).

Spanish Teacher made sure to mention that it is important to build relationships between students and teachers and to reach out to students as much as possible. This regular contact enables the advisor to be an effective advocate.

Science Teacher also discussed how she uses the program to help her students succeed and lets them know they have a contact at the school. She described her experiences with a struggling student:

I contact my advisees in order to let them know that I am here if they have any questions or concerns. This gives my group of students a contact person if they need something and they are not sure who can help them. One of my advisees from last year struggled. I met the student and her mom on conference day and we discussed her struggles. She wanted to be a make-up artist and wanted to get a GED (general education diploma) instead of finishing high school. We were in contact many times throughout the year when she felt like she wanted to quit. She progressed to 12th grade so she was assigned to a different advisor this year (Interview, November 5, 2015).

The advisee/advisor program was started as a way to help students. Mobile students are able to have an advocate within the school, even when they do not meet with them face-to-face.

The goal for all three of these programs: information forms, progress checks, and advisor/advisee is to enable teachers and staff at the school to have the opportunity to build relationships with the students they teach. Many of the teachers use these programs to get to know their students better and stay informed about their academic progress. The programs are institutional policies that help mobile students who are only doing courses virtually by making

sure there is the opportunity to build student teacher relationships and procedures in place to catch students before they fall behind.

Adjustments had to be made in the virtual school in order to counteract unique challenges present. Policies and procedures were created to help ensure students are completing courses in a timely manner and to enable teachers and students to form productive relationships. The virtual school helps teachers counteract unique challenges because of the nature of the virtual school. The virtual school also helps highly mobile students graduate by allowing both teachers and students to work outside of strictures present in mainstream schools.

Conclusion

This chapter presents findings that demonstrate the percentage of mobile students who attend a virtual school and the ways in which that virtual school helps mobile students. Findings included mobile students being able to access courses at all hours of the day because of the asynchronous nature of the school. The asynchronous nature of the virtual school mediates mobility issues despite the communication and instructional challenges the technology presents. The school has also created policies and procedures to help ensure students are completing courses in a timely manner and help nurture the individualized nature of the program.

Chapter 5 – Discussion

This study was designed to better understand how a virtual school helps mobile students. Two questions were investigated:

1. In what ways is mobility represented in a virtual school in an urban school district located in the Midwest?
2. How does this virtual school meet the needs of mobile students?

This chapter includes a summary of the four findings that emerged, a discussion of the significance of the findings, and suggestions for future research.

Summary of Findings

In order to understand why students drop out of high school, it is important to understand the risk factors. Mobility is one risk factor for students dropping out of high school (Rumberger & Larson, 1998). Mobility makes it difficult for the student to persist in a mainstream school. This study highlighted the role of mobility by examining a virtual school where 100% of students were mobile, with 60% of those students attending at least three different schools during high school, and 9% attending five or more schools. Mantziocopoulos and Knuston (2000) found that educational mobility is frequently linked to residential mobility; their study of low income families moved to seek a better residence within the same school district. The findings of this present study confirm that movement within one district leads to movement between schools for numerous students. Virtual schools offer an opportunity to disrupt the link between educational mobility and residential mobility. The search for improved housing, or the challenges of unstable housing, no longer needs to lead mobile students. Additionally, because virtual schools may appeal to mobile students, virtual schools need to recognize that significant portions of their student population may be mobile.

While there are many types of virtual only students, the virtual school has established measures that help mobile students progress through classes. These measures includes an asynchronous environment and the use of technology to help students progress. The asynchronous nature of the virtual school enables students and teachers to work outside the strictures that may be in place in a mainstream school. The virtual school has adapted to the needs of students. The ways in which information is taught are different at the virtual school and

teachers and staff use this variety to their advantage to help students. Teachers at the virtual school have found ways to counteract communication and instruction challenges faced in an asynchronous environment. The school does this by empowering teachers to have face-to-face meetings with students and fostering collaborative learning about technology. The virtual school has also developed procedures to keep students progressing through coursework: an automatic email system helps teachers keep track of student progress, information forms help teachers learn about students, and the advisor/advisee program provides an advocate for students.

Significance of Findings

The findings of this study help develop a better understanding of how Institutional Theory (Rumberger, 2001) and Academic Mediation Theory (Vygotsky, 1978) can be used to address the needs of mobile students not attending mainstream schools. This study highlights the problem of mobility that is present in the United States and the potential for virtual schools to create consistent educational experiences for those students.

Mobility and asynchronicity. Miron, Horvitz, and Gulosino (2013) found that for the 2011-2012 school year, over 200,000 students were enrolled in a virtual high school in the United States. Mobility information was not included in the Miron et al. (2013) study, but it reflects the potential of virtual schools to meet the educational needs of mobile students. Taken together, the finding from the Miron et al. (2013) study and this study's finding that 100% of virtual students are mobile, suggests there is a great need for programs that help mobile students.

In addition to identifying mobility as a risk factor for students dropping out of high school (Rumberger & Larson, 1998), Rumberger (2001) found that institutions either help or hurt students who are at risk for dropping out of high school. More importantly, he found that a school itself has the greatest impact on whether an at risk student drops out of high school.

According to this theory, there are two ways in which schools encourage students to drop out: directly and indirectly (Rumberger, 2001; Finn, 1989; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989). Directly, schools have policies and procedures that effect at risk students. Push Out Theory (Jordan, Lara, & McPartland, 1996), a part of Institutional Theory, also discusses how specific school processes and practices, such as zero tolerance policies, help “push out” at risk students. Many of these similar theories focus on policies that make school unwelcoming and diminish the connection between students and the school (Jordan, Lara, & McPartland, 1996). Indirectly, schools sometimes do not offer enough extra-curricular activities or transportation. The absence of these services can nudge a student considering dropping out to do so. The virtual school demonstrated awareness of the high mobility of its students. Counselor specifically described the different types of students that are present at the virtual school, which included students who move residences frequently, and who had also attended many schools before starting the virtual school. This awareness lead to policies and procedures specifically designed to help mobile students.

Academic Mediation Theory (Vygotsky, 1978) states there are four forms involved in mediation: objects (i.e. textbooks), symbolic tools (i.e. language, organized activities (i.e. classroom tasks), and human beings (i.e. teachers, peers). Administrator and teacher awareness of the number of mobile students at the virtual school and the asynchronous nature of the school mediate the academic difficulty a mobile student can have. The technology that the school uses enables the teacher and the students to have a deeper understanding of the subject matter. Arts and Humanities Teacher differentiates his instruction using technology and Spanish Teacher uses technology in such a way that it allows her students to participate in formative assessments.

The asynchronous nature of the virtual school studied confirms the positive potential for virtual schools to serve mobile students. Survey research (Mupinga, 2005; Harvey et al., 2014) indicates that virtual students value virtual learning because they can attend school from any location and at any time. English Teacher demonstrated a similar awareness when he discussed how many of his students have jobs and children, and cannot always work on school during traditional school day hours. Clearly, the asynchronous nature of virtual schools is critical for mobile students. The fact that students can work on their course at any time of the day and from anywhere there is an internet connection makes virtual schools advantageous for mobile students. Additionally, the open entry/ open exit policy allows students to not only go at their own pace, but also begin and finish a course at any time during the school year - including traditional school year breaks.

The virtual school is meeting the needs of and helping mobile students by providing an asynchronous environment and having a good understanding of how many of the students attending are mobile. This enables the teachers to put policies and procedures in place that are effecting the students in a positive way instead of pushing them out of high school.

Counteracting challenges and lack of face-to-face interaction. Counteracting challenges and adapting to the limitations of virtual learning has been another way the school has been able to help mobile students. Podoll and Darcy (2005) explored fears about and potential negative effects of virtual school on students and family members. Most anxieties and negative effects involved technology challenges and teacher communication. The present study found that virtual learning presented specific challenges to communication and instruction: keeping up with student progress and enhancing instructional effectiveness. The virtual school counteracted these challenges through direct and indirect actions. Directly, the school started progress checks

and the advisor/advisee program. Indirectly, the school encourages face-to-face meetings and used technology Thursdays.

Wiest, Wong, Cervantes, Craik and Kreil, (2001) discussed intrinsic motivation as a needed attribute of the virtual student. There is a lack of face-to-face interaction between student and teacher and this can make it difficult for students who are not intrinsically motivated. The progress check program and the advisor/advisee program were created two years ago in order to counteract the lack of face-to-face interaction. Students who do not have intrinsic motivation are less likely to be successful at the virtual school. Administrator understands the need for progress checks and the advisor/advisee program to help students. His understanding has led to him to make it easy for the teachers to meet with the students face-to-face if that is the best way to help a student. Teachers do not have to ask permission to meet with a student and they are allowed to meet the student at the library or a school in order to help them. This is important because the mobile student may have difficulty making it to the main building for tutoring.

Indirectly, the lack of face-to-face instruction is a challenge to the school. To combat this, Spanish Teacher used technology to assess her student's speaking skills in her classes. Small changes to communication, such as this, help counteract the inability to teach students in a face-to-face environment. Teachers collaborate using technology each Thursday in order to find new ways to communicate with their students; Arts and Humanities Teacher used technology to differentiate his lessons. Teachers collaborating on Thursdays could potentially lead from one teacher helping one student, to one teacher helping all teachers and students.

Implications

This study was motivated by a desire to better understand how schools can help mobile students instead of pushing them out. The problem of mobility is one that occurs in every school

district (Miron et al., 2013). While the literature on virtual schools, mobility (Rumberger & Larson, 1998), and alternative (Jordan, Lara, & McPartland, 1996) schools is new, the literature on students dropping out of high school and risk factors to look for is not. The findings of this study help to deepen the understanding of not only the challenge of mobility, but one school's solution to help mobile students. Two main implication categories emerge from the findings: implications for administration and implications for instruction.

Administration. The importance of having alternative options available to students is apparent. While this is a snapshot of what one school in one district is doing to help mobile students, there are several things administrators can use in order to create or improve a virtual school. The administrative level, whether it be at the district level or the school level must take mobile students in to consideration when hiring teachers. It is important to hire teachers that are student centered. Ensuring there is a teacher that keeps in mind student needs is essential to helping a mobile student. While the need is there for a teacher to understand the subject they teach and the technology aspect of a virtual school, it is more important for the teacher to know the student and understand their unique circumstances. Mobile students need more than a teacher who can use the computer and design curriculum.

The asynchronous nature of the virtual school studied may make some administrators uncomfortable. Administrators must learn from already established virtual schools to understand how those schools have made the challenge of asynchronous coursework benefit the students with which they work. Schools often determine, positively or negatively, if an at risk student stays in school. Knowledge about virtual schools and their potential to help mobile students is essential for administrators and policy makers.

Instruction. The ways in which teachers and students interact in a virtual environment is explored in this study. From this information, instruction can be understood as different; it is different in the way it is developed and delivered. Breaking away from the mainstream school way of delivering content is shown to have helped mobile students in this case. Virtual school teachers, working in an asynchronous environment, may benefit from the findings presented here by expanding their instructional practice. This study confirms the literature on Institutional Theory (Rumberger, 2001) and Academic Mediation Theory (Vygotsky, 1978) by exploring the ways in which a virtual school can mediate the negative aspects of mobility.

Limitations

There were two limitations present in this study. The first limitation is the lack of student voice that is present in the study. Schools are made up of not only faculty and staff, but students as well. The nature of the mobile student made it very difficult to have any student participants. Each student was contacted via email and in course messaging and out of the twenty students who met the criteria there was one person willing to participate. It was determined there would not be enough information gained from one student participant to be valuable. Without student voice, the study is only able to create a partial picture of how a virtual school helps mobile students.

The second limitation is the lack of time. At the time of data collection, the virtual school was changing software delivery platforms. A different platform might present different understanding of communication challenges and responses by the school and teachers. Longer time in the field would also allow researchers to see how changes in technology impact the virtual school process.

Further Research

Future studies would benefit from focusing on student voice. In this study, gaining student perspective was difficult because of the nature of mobile students. There are ways that student voice could potentially enhance each of the four findings: (a) student mobility experiences, (b) point of view about being in an asynchronous environment, (c) how students feel about the challenges present in the technology, (d) communication in virtual learning, and (e) how the mobile negotiate building teacher relationships without face-to-face instruction. One hundred percent of students who attend the virtual school are mobile. There are many reasons the students are mobile. In the future, having student perspectives on the experience of mobility and the high school experience should shape policies and systems designed to meet the needs of mobile students. Student voice about working in an asynchronous environment would be beneficial provide a different perspective on the challenges and positive aspects of the virtual environment. Student thoughts about the challenges of technology and communication with the teacher would be beneficial to this area of literature, as well as how they overcome those challenges on their end. Finally, student voice on how they communicate and build a relationship with their teacher, when they may not ever meet them face-to-face, and how they may have to advocate for themselves differently. Additional research should prioritize the voice of mobile students.

Conclusion

There is relatively little research about virtual learning at the high school level (Harvey et al., 2014). The aim of this study was to deepen the understanding of a newer phenomenon of virtual schools and how a particular school is helping mobile students. Findings indicate that

virtual schools have the potential to create institutional structures that embrace the needs of mobile students and virtual teachers maximized technology to support student needs.

Appendix A

General Information Form

What name do you like to be called?

What is an alternative phone number where I can reach you?

Do you have an alternative address?

What is the name of your parent or legal guardian if you are under 18?

What is the contact information for a parent or legal guardian if you are under 18?

Appendix B

Arts and Humanities Teacher Information Form

What name do you like to be called?

What is an alternative phone number where I can reach you?

Do you have an alternative address?

What is the name of your parent or legal guardian if you are under 18?

What is the contact information for a parent or legal guardian if you are under 18?

Why are you taking this class? Please be honest.

What is the best way you show your knowledge of something? Writing? Doing a project?
Something else?

Tell me something about yourself you would like me to know?

Appendix C

Spanish Teacher Information Form

What name do you like to be called?

What is an alternative phone number where I can reach you?

Do you have an alternative address?

What is the name of your parent or legal guardian if you are under 18?

What is the contact information for a parent or legal guardian if you are under 18?

Have you taken a language course before? If so, which languages?

Why are you taking this course?

What do you like to do in your spare time?

Do you know anyone who is a native speaker of Spanish?

How do you feel you learn best?

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